



Sequence Listing

<110> Ashkenazi, Avi J.
Frantz, Gretchen
Goddard, Audrey
Gonzalez, Lino
Gurney, Austin L.
Polakis, Paul
Polson, Andrew
Wood, William
Wu, Thomas D.
Zhang, Zemin

<120> COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
TREATMENT OF TUMOR

<130> P5032R1-US

<140> US 10/712,892

<141> 2003-11-13

<150> US 60/426,847

<151> 2002-11-15

<150> US 60/431,250

<151> 2002-12-06

<150> US 60/437,344

<151> 2002-12-31

<160> 42

<210> 1

<211> 2625

<212> DNA

<213> Homo sapiens

<400> 1

cggcagccct gacgtgatga gctcaaccag cagagacatt ccatcccaag 50
agaggtctgc gtgacgcgtc cgggaggcca ccctcagcaa gaccaccgta 100
cagttggtgg aaggggtgac agctgcattc tcctgtgcct accacgtaac 150
caaaaatgaa ggagaactac tgtttacaag ccgccctggt gtgcctgggc 200
atgctgtgcc acagccatgc ctttgcccca gagcggcggg ggcacctgcg 250
gccctccttc catgggcacc atgagaaggg caaggagggg caggtgctac 300
agcgctccaa gcgtggctgg gtctggaacc agttcttcgt gatagaggag 350
tacaccgggc ctgaccccggt gcttggtgggc aggcttcatt cagatattga 400

ctctggtgat gggaacatta aatacattct ctcaggggaa ggagctggaa 450
 ccatttttgt gattgatgac aaatcagggg acattcatgc caccaagacg 500
 ttggatcgag aagagagagc ccagtacacg ttgatggctc aggcggtgga 550
 cagggacacc aatcgccac tggagccacc gtcggaattc attgtcaagg 600
 tccaggacat taatgacaac cctccggagt tcctgcacga gacctatcat 650
 gccaacgtgc ctgagaggtc caatgtggga acgtcagtaa tccaggtgac 700
 agcttcagat gcagatgacc ccacttatgg aaatagcgcc aagttagtgt 750
 acagtatcct cgaaggacaa ccctatTTTT cggtggaagc acagacaggt 800
 atcatcagaa cagccetacc caacatggac agggaggcca agggaggagta 850
 ccacgtggtg atccaggcca aggacatggg tggacatatg ggcggaactct 900
 cagggacaac caaagtgcg atcacactga ccgatgtcaa tgacaacca 950
 ccaaagtttc cgcagaggct ataccagatg tctgtgtcag aagcagccgt 1000
 ccctggggag gaagtaggaa gagtgaagc taaagatcca gacattggag 1050
 aaaaaggctt agtcacatac aatattgttg atggagatgg tatggaatcg 1100
 tttgaaatca caacggacta tgaaacacag gaggggggtga taaagctgaa 1150
 aaagcctgta gattttgaaa ccgaaagagc ctatagcttg aaggtagagg 1200
 cagccaacgt gcacatcgac ccgaagttta tcagcaatgg ccctttcaag 1250
 gacactgtga ccgtcaagat ctcagtagaa gatgctgatg agccccctat 1300
 gttcttggcc ccaagttaca tccacgaagt ccaagaaaat gcagctgctg 1350
 gcaccgtggt tgggagagtg catgccaaag accctgatgc tgccaacagc 1400
 ccgataaggt attccatcga tcgtcacact gacctcgaca gatttttcac 1450
 tattaatcca gaggatggtt ttattaaaac tacaaaacct ctggatagag 1500
 aggaaacagc ctggctcaac atcactgtct ttgcagcaga aatccacaat 1550
 cggcatcagg aagcccaagt ccagtggcc attaggggcc ttgatgtcaa 1600
 cgataatgct cccaagtttg ctgcccctta tgaagggttc atctgtgaga 1650
 gtgatcagac caagccactt tccaaccagc caattgttac aattagtga 1700
 gatgacaagg atgacacggc caatggacca agatttatct tcagcctacc 1750
 ccctgaaatc attcacaatc caaatctcac agtcagagac aaccgagata 1800
 acacagcagg cgtgtacgcc cggcgtggag ggttcagtcg gcagaagcag 1850

gacttgtacc ttctgcccac agtgatcagc gatggcggca tcccgcccat 1900
 gagtagcacc aacaccctca ccatcaaagt ctgcgggtgc gacgtgaacg 1950
 gggcactgct ctctgcaac gcagaggcct acattctgaa cgccggcctg 2000
 agcacaggcg ccctgatcgc catcctcgcc tgcacgtca ttctcctggt 2050
 cattgtagta ttgtttgtga ccctgagaag gcaaaagaaa gaaccactca 2100
 ttgtctttga ggaagaagat gtccgtgaga acatcattac ttatgatgat 2150
 gaaggggggtg ggaagaaga cacagaagcc tttgatattg ccaccctcca 2200
 gaatcctgat ggtatcaatg gatttatccc ccgcaaagac atcaaacctg 2250
 agtatcagta catgcctaga cctgggctcc ggccagcgcc caacagcgtg 2300
 gatgtcgatg acttcatcaa cagagaata caggaggcag acaatgaccc 2350
 cacggctcct ccttatgact ccattcaaat ctacggttat gaaggcaggg 2400
 gctcagtggc cgggtccctg agctccctag agtcggccac cacagattca 2450
 gacttggact atgattatct acagaactgg ggacctcgtt ttaagaaact 2500
 agcagatttg tatggttcca aagacacttt tgatgacgat tcttaacaat 2550
 aacgatacaa atttggcctt aagaactgtg tctggcggtc tcaagaatct 2600
 agaagatgtg taacaggat ttttt 2625

<210> 2
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 2
 aactcaaact cctctctctg ggaaaacgcg gtgcttgctc ctcccggagt 50
 ggccttggca ggggtgttga gccctcggtc tgccccgtcc ggtctctggg 100
 gccaaaggctg gggttccctc atgtatggca agagctctac tcgtgcggtg 150
 cttcttctcc ttggcataca gctcacagct ctttggccta tagcagctgt 200
 ggaaatttat acctcccggg tgctggaggc tgtaaatggg acagatgctc 250
 ggttaaaatg cactttctcc agctttgccc ctgtgggtga tgctctaaca 300
 gtgacctgga attttcgtcc tctagacggg ggacctgagc agtttgtatt 350
 ctactaccac atagatccct tccaacccat gagtgggcgg tttaaggacc 400
 ggggtgtcttg ggatgggaat cctgagcggg acgatgcctc catccttctc 450
 tggaaactgc agttcgacga caatgggaca tacacctgcc aggtgaagaa 500

cccacctgat gttgatgggg tgatagggga gatccggctc agcgtcgtgc 550
 aactgtacg cttctctgag atccacttcc tggctctggc cattggctct 600
 gcctgtgcac tgatgatcat aatagtaatt gtagtgggtcc tcttccagca 650
 ttaccggaaa aagcgatggg ccgaaagagc tcataaagtg gtggagataa 700
 aatcaaaaga agaggaaagg ctcaaccaag agaaaaaggc ctctgtttat 750
 ttagaagaca cagactaaca attttagatg gaagctgaga tgatttccaa 800
 gaacaagaac cctagtattt cttgaagtta atggaaactt ttctttggct 850
 tttccagttg tgaccctgtt tccaaccagt tctgcagcat attagattct 900
 agacaagcaa caccctctg gagccagcac agtgctcctc catatcacca 950
 gtcatacaca gcctcattat taaggcttta tttaatttca gagtgtaaat 1000
 tttttcaagt gctcattagg ttttataaac aagaagctac atttttgccc 1050
 ttaagacact acttacagtg ttatgacttg tatacacata tattgggtatc 1100
 aaaggggata aaagccaatt tgtctgttac atttcctttc acgtatttct 1150
 tttagcagca cttctgtac taaagttaat gtgtttactc tctttccttc 1200
 ccacattctc aattaaaagg tgagctaagc ctctcgggtg tttctgatta 1250
 acagtaaatt ctaaattcaa actgttaaatt gacattttta tttttatgtc 1300
 tctccttaac tatgagacac atcttgtttt actgaatttc tttcaatatt 1350
 ccaggtgata gattttttgtc g 1371

<210> 3
 <211> 1274
 <212> DNA
 <213> Homo sapiens

<400> 3
 ggcacgaggc gattcagggg agggagcaac tggagcctca ggcctccag 50
 agtagtctgc ctgaccacc tggagcccac agaagcccag gacgtctccc 100
 gcgaggcctc cccgtgtgtg gctgaggatg gctgagcagc agggccggga 150
 gcttgaggct gagtgtcccg tctgctggaa ccccttcaac aacacgttcc 200
 atacccccaa aatgttggat tgctgccact ccttctgcgt ggaatgtctg 250
 gccacactca gccttgtgac tccagcccgg cgccgcctgc tgtgccact 300
 ctgtcgccag cccacagtgc tggcctcagg gcagcctgtc actgacttgc 350
 ccacggacac tgccatgtc accctgtctc gcctggagcc ccaccatgtc 400

atcctggaag gccatcagct gtgcctcaag gaccagccca agagccgcta 450
 ctctctgcgc cagcctcgag tctacacgct ggaccttggc cccagcctg 500
 ggggccagac tgggccgccc ccagacacgg cctctgccac cgtgtctacg 550
 cccatcctca tccccagcca ccactctttg agggagtgtt tccgcaaccc 600
 tcagttccgc atctttgcct acctgatggc cgtcatcctc agtgtcactc 650
 tgttgctcat attctccatc ttttgacca agcagttcct ttgggggtgtg 700
 gggtgagtgc tgttcccaga caagaaacca aacctttttc ggttgctgct 750
 gggtatgggtg actacggagc ctcatcttggc attgtcttcc tttgtagtgt 800
 tgtttatttt acaatccagg gattgttcag gccatgtgtt tgcttctggg 850
 aacaatttaa aaaaaaaaaa aaaaaacgaa aagcttgaag gactgggaga 900
 tgtggagcga cctccgggtg tgagtgtggc gtcattggaag ggagagaag 950
 cggttctgac cacagagctc cacagcaagt tgtgccaaag ggctgcacag 1000
 tggatccag gaacctgact agcccaaata gcaagttgca tttctcactg 1050
 gagctgcttc aaaatcagtg catatttttt tgagttgctc ttttactatg 1100
 ggttgctaaa aaaaaaaaaa aaaaaattgg gaagtgaagt tcaattctgt 1150
 gggtaaatgt gtgtttgttt ctctttgaat gtcttgccac tggttgcagt 1200
 aaaagtgttc tgtattcatt aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1250
 aaaaaaaaaa aaaaaaaaaa aaaa 1274

<210> 4
 <211> 2032
 <212> DNA
 <213> Homo sapiens

<400> 4
 gaagcgcgct cccggggagg tgttgagcc atggctacgg cagccggcgc 50
 gacctacttt cagcgaggca gtctgttctg gttcacagtc atcaccctca 100
 gctttggcta ctacacatgg gttgtcttct ggcctcagag tatcccttat 150
 cagaaccttg ggcccctggg ccccttcact cagtacttgg tggaccacca 200
 tcacaccctc ctttgcaatg ggtattggct tgccctggctg attcatgtgg 250
 gagagtcctt gtatgccata gcattgtgca agcataaagg catcacaagt 300
 ggtcgggctc agctactctg gttcctacag actttcttct ttgggatagc 350
 gtctctcacc atcttgattg cttacaaacg gaagcgccaa aaacaaactt 400

gaagttgtct gaaagcttgc tctacacttt tacattcatc ctcacccttt 450
 tttttgtggg gtagaggagg tgcagtaatt tactcagtga tctttctact 500
 ttctagaaac tgtccttcaa agctctttta gacccctcg ttagtcagtt 550
 tcttctctta tatgctctgg ttgagcttga atagaccagt tgttacttaa 600
 gaaagaaaca gagaaagatt ttagcttttc aatcctattt ggcagaggac 650
 ttcagctacc ttcttacagt ctttggctgt gttggtaccc tegtgtgctc 700
 tgagctaagc cacatactaa actgactttt tggtttgtat acccttgctc 750
 ccgccttctg atgaaaacac cttaccctca caaccacat ctttcctctc 800
 ctttcaaag ctctttccac cttgctgcac taagataaag tgacacttcc 850
 actatatgtc aattccacac acatttatta ggtacctgtg aggtaggatc 900
 ctatcctctc aaacttccat ttctcatgct acagagaaag ataaggaaga 950
 tgagcaagtg cctggaatgg ggcaggctga gcagtcacac aggcatagag 1000
 gcacgctgag aacctggagg ggagactgca gagtgccttc cctgatgctg 1050
 cagccggaag tgatccttcc ctccacctgg cccctgggac actgtgctct 1100
 gcagtgtgca gggcctgatg gcactgctag attgctcctt cagctcaggg 1150
 ccacagctta aacagcttta cttttccctt cagcacctgt cccactatct 1200
 tgcacacagg tgctctaacc atgtttattg aacaaaggag ggaaactgat 1250
 ttcactttca cttgttcatt atcattccaa tttttatgtg aaaatggcac 1300
 aaccatttg gggtagcctc accccaaaat aaaagcccaa gtctaccttt 1350
 gactggtacc accttttttg tggtttcgtt ggtgagaaac ctttatcttt 1400
 ttcatacctt tctattctca atcacttctc caaaagtgtg tctttccagc 1450
 tctgatttat tcaaaacaca agcatttctg tttagagatt ctagcccatg 1500
 ggttatctgg ctagtattta cctctcctgt tcacttagtt atactttatt 1550
 attgctcaca ggctggggag gcagaatgac tctgtcacca ctaggagcca 1600
 ttagggcttc ttccctggag gactgcctgc ttgctttctg gggacactag 1650
 ccctcatttc ccttctgtgg tacagtgggg caaattattt gtattaaagca 1700
 aacatttatg ggaaacaacc cgctcccgaa aacggagccc ccaagtaaag 1750
 cacaaccctg aaagattatg aactatgaat tgtctctagt agagataaat 1800
 ttctgcaaac atatctcagt cttccctctg tttctctggt gattaagaag 1850

ttcctttttg gtaaggaaaa ggattttttaa ccatagagtt aggcattcatg 1900
 gaaattcaaa ccagattttct taatacctgg tcttcctcaa agagaaataa 1950
 taacagtaat agtgggtgctg ggaacaatat ggcagattat tgaatgaaat 2000
 tgattaaactt gaataaaatg ctgtgaattt tc 2032

<210> 5
 <211> 1572
 <212> DNA
 <213> Homo sapiens

<400> 5
 ggcacgagggc cgcagcggac tgccctttcc caagatggcg tcgaagatag 50
 gttcgagacg gtggatgttg cagctgatca tgcagttggg ttcggtgctg 100
 ctcacacgct gccccttttg gggctgcttc agccagctca tgctgtacgc 150
 tgagaggggt gaggcacgcc ggaagcccgga catcccagtg ccttacctgt 200
 atttcgacat gggggcagcc gtgctgtgcg ctagtttcat gtcctttggc 250
 gtgaagcggc gctggttcgc gctggggggc gcactccaat tggccattag 300
 cacctacgcc gcctacatcg ggggctacgt ccactacggg gactggctga 350
 aggtccgtat gtactcgcgc acagttgcca tcatcggcgg ctttcttgtg 400
 ttggccagcg gtgctgggga gctgtaccgc cggaaacctc gcagccgctc 450
 cctgcagtcc accggccagg tgttcctggg tatctacctc atctgtgtgg 500
 cctactcact gcagcacagc aaggaggacc ggctggcgta tctgaaccat 550
 ctcccaggag gggagctgat gatccagctg ttcttcgtgc tgtatggcat 600
 cctggccctg gcctttctgt caggctacta cgtgaccctc gctgcccaga 650
 tcctggctgt actgctgccc cctgtcatgc tgctcattga tggcaatgtt 700
 gcttactggc acaacacgcg gcgtgttgag ttctggaacc agatgaagct 750
 ccttgagag agtgtgggca tcttcggaac tgctgtcatc ctggccactg 800
 atggctgagt tttatggcaa gaggctgaga tgggcacagg gagccactga 850
 gggtcaccct gccttcctcc ttgctggccc agctgctgtt tatttatgct 900
 ttttggctctg tttgtttgat cttttgcttt tttaaaattg ttttttcag 950
 ttaagaggca gctcatttgt ccaaatttct gggctcagcg cttgggaggg 1000
 caggagccct ggcactaatg ctgtacaggt ttttttcctg ttaggagagc 1050
 tgaggccagc tgcccactga gtctcctgtc cctgagaagg gagtatggca 1100

gggctgggat gcggtactg agagtgggag agtgggagac agaggaagga 1150
 agatggagat tggaagtgag caaatgtgaa aaattcctct ttgaacctg 1200
 cagatgcagc taggtctctg agtgctgttt ggagactgtg agagggagtg 1250
 tgtgtgttga cacatgtgga tcaggcccag gaagggcaca ggggctgagc 1300
 actacagaag tcacatgggt tctcagggtg tgccaggggc agaaacagta 1350
 ccggctctct gtcactcacc ttgagagtag agcagaccct gttctgctct 1400
 gggctgtgaa ggggtggagc aggcagtggc cagctttgcc cttctgctg 1450
 tctctgtttc tagctccatg gttggcctgg tgggggtgga gttccctccc 1500
 aaacaccaga ccacacagtc ctccaaaaat aaacatttta tatagacaaa 1550
 aaaaaaaaaa aaaaaaaaaa aa 1572

<210> 6
 <211> 1451
 <212> DNA
 <213> Homo sapiens

<220>
 <221> Unsure
 <222> 1141
 <223> Unknown base

<400> 6
 ggccgcggct cgcctttggc ctttcttacc aggatgaaaa cgcttctgtt 50
 tgggtgtctgg gccctgctgg ccttgatcct ttgcccagggt gtcccgaag 100
 agttgtttga ggtttctatt tggccaagtc aggccctgggt ggagtttga 150
 cagtccctag tgtgcaactg cagcactact tgcccagacc caggaccag 200
 tggaattgag accttcttaa agaaaaactca ggtggacaaa gggcctcagt 250
 ggaaagagtt tcttctggag gatgtcacag agaattccat cctgcagtgc 300
 ttcttctctt gtgcagggat tcaaaaggac acaagccttg gcatcactgt 350
 gtatcagcca ccagagcaag tgatcctgga gctgcagcct gctgggtgg 400
 ccgtggacga agccttcaca gtgaagtgtc atgtaccag ttagcaccc 450
 ttggagagtc tcacccttgc ctttctccag ggtaaccaag aactgcatag 500
 aaagaacttt acgagcttgg ctgtggcctc ccaaagagct gaagtcatca 550
 tcagtgtcag agcccaaaaag gagaatgaca gatgcaattc ttcctgcat 600
 gcagaactgg acttgagttt gcaagggtggg aggctctttc aaggcagctc 650
 acccatcaga atagtccgga tctttgaatt ctctcagagt cccacatct 700

gggctctcttc ccttttggag gctgggatgg cggagactgt gagctgcgag 750
 gtggctaggg tgtttccagc caaagaagtt atgttccada tgttcctgga 800
 agaccaagag ctgagctcct ccctttcctg ggaggggggac acagcâtggg 850
 ccaatgctac cattcggacc atggaggctg gtgatcagga actgtcttgc 900
 tttgcatctc tgggtgcaat ggaacagaag acaagaaagc tagtgcatag 950
 ctacagcttc cctccaccaa tcctggagct aaaagaatca tacccattgg 1000
 cagggaccga cattaatgtg acctgctcag ggcattgtatt aacatcaccc 1050
 agccctactc ttcggcttca gggagcccca gacctccctg ctggggagcc 1100
 tgcttggtt ctacttactg ccaggaggga agatgatggc ngaaatttct 1150
 cctgcgaggg ctcttttggtg gtgcagggtc agcggttgat gaaaaccact 1200
 gtgatccagc tccatatact aaagccacag ttagagggaat ccagttgccc 1250
 tggcaaacag acctggctgg aagggatgga acacacgctc gcctgcgtcc 1300
 caaagggaaa ccagctcca gccttggtgt gtacctggaa tggggtggtc 1350
 tttgaccttg aagtgccaca gaaggcaacc tagaaccaca ctggaacct 1400
 ccgctacaca gccactaacc agctgggctc tgtcagcaaa gacattgctg 1450
 t 1451

<210> 7

<211> 2652

<212> DNA

<213> Homo sapiens

<400> 7

ccacgcgtcc gttctgaggt gcattctttt tttgatgaga ggcattctcta 50
 ggtaccatcc ctgacctggt cctcatgctg ccgaggctgt tgctgttgat 100
 ctgtgctcca ctctgtgaac ctgccgagct gtttttgata gccagcccct 150
 cccatcccac agagggggagc ccagtgacct tgacgtgtaa gatgcccttt 200
 ctacagagtt cagatgcccc gttccagttc tgctttttca gagacacccg 250
 ggccttgggc ccaggctgga gcagctcccc caagctccag atcgctgcca 300
 tgtggaaaaga agacacaggg tcatactggt gcgaggcaca gacaatggcg 350
 tccaaagtct tgaggagcag gagatcccag ataaatgtgc acatcccggg 400
 gtctcgcccc atcctcatgc tcagggtccc cagggcccg gctgcagtgg 450
 aggatgtgct ggagcttcac tgtgaggccc tgagaggctc tcctccaatc 500

ctgtactggg tttatcacga ggatatcacc ctggggagca ggtcggcccc 550
ctctggagga ggagcctcct tcaacctttc cctgactgaa gaacattctg 600
gaaactactc ctgtgaggcc aacaatggcc tgggggcccc gcgcagttag 650
gcggtgacac tcaacttcac agtgcctact ggggccagaa gcaatcatct 700
tacctcagga gtcattgagg ggctgctcag cacccttggg ccagccaccg 750
tggccttatt attttgctac ggctcaaaa gaaaaatagg aagacgttca 800
gccagggatc cactcaggag ccttccagcc ttacccaag agttcaccta 850
cctcaactca cctaccccag ggagctaca gcctatatat gaaaatgtga 900
atgttgtaag tggggatgag gtttattcac tggcgacta taaccagccg 950
gagcaggaat cagtagcagc agaaaccctg gggacacata tggaggacaa 1000
ggtttcctta gacatctatt ccaggctgag gaaagcaaac attacagatg 1050
tggactatga agatgctatg taagggtatg gaagattctg ctctttgaaa 1100
accatccatg accccaagcc tcaggcctga tatgttcttc agagatcctg 1150
gggcattagc tttccagtat acctcttctg gatgccattc tccatggcac 1200
tattccttca tctactgtga agtgaagttg gcgcagccct gaagaaacta 1250
cctaggagaa ctaatagaca caggagtgc agggactttg ttatcagaac 1300
cagattcctg ccggctcctt tgaaaacagg tcatattgtg ctcttctgtt 1350
tacaagagga aacaagatgg aataaaagaa attgggatct tgggttgagg 1400
ggacagtga gcttagagca catgaactca aggttagtga ctctgcagga 1450
cttcacagag agagctgtgc ccatcattca gtccaagtgc tttctctgcc 1500
cagacagcac agaactccag cccgctact tacatggatc atcgagtctc 1550
cacctaaaat atgattctat ttattttgag tcaactgttac caaattagaa 1600
ctaaaacaaa gttacataaa aagttattgt gactccactt aatttttagt 1650
acgtattttt gtatatatag gccaacctat accacatcca aaattatgta 1700
tctattacag cccctagaag ctttataaat acagtgtgtc ttcttttatt 1750
cacaaaat ttgaaatcgt ggtaatatgg tttgaaacct gtatcttaat 1800
tatttttttt ttaaattgag acagggctct actctgtcac tcaatctgga 1850
atgcagtggc acaatcttgc ctcaactgca cgctgcctc tcaggctcaa 1900
gcaaacctct cacctcagcc tgctgagtag ctgggactac aggcacatgc 1950

caccaaactt ggccattttt tgtcttacgt agagacaaga tttcaccggt 2000
 ttgcccaggc tgggtctcaaa ctctctgggct caagcaatgt attgaatttt 2050
 aaaataacca ggcactcact cttatgaatt aataaacatt tggagggtata 2100
 taaagtaaaa agttaaaagtc tttcctgtaa gttaacacaa atgttaacta 2150
 ttgttaaaaa ctttacaggt agctctctag atatttttct atttttgtat 2200
 gtatacttat gcatacatgt aagtatataa acatttagaa gtgtacctat 2250
 ctaacaaact attatgaaat actttcaaat ctgtaaatag atctattata 2300
 ctatttttaa agtctctata gtagtgtgtt atatagataa atcataactt 2350
 ttttcttttt ttattgtagt aaatatgcac aacataaaaat tgatcatttt 2400
 aaccattttt aagtgtacaa ttcagtggca ttaagtacta tcataatata 2450
 ttttaatcct tctcatcact ggtggacatt aaggagactc tcaaaaaatt 2500
 catattataa aaacaaagtt caaacaatg tctttgtact agcatattat 2550
 ggcactcctg ctggattatc tgaaggataa atttgtaa atagtagtgc 2600
 tagattatgc atattaaata ttcttgtaa atagtcaaaa aaaaaaaaaa 2650

aa 2652

<210> 8

<211> 3459

<212> DNA

<213> Homo sapiens

<400> 8

ctcaatcagc tttatgcaga gaagaagctt actgagctca ctgctggtgc 50
 tgggtgtaggc aagtgtgtct ttggcaatct gggctgacct ggcttgtctc 100
 ctcagaactc cttctccaac cctggagcag gcttccatgc tgctgtgggc 150
 gtccttgtctg gcctttgtct cagtctgtgg acaatctgca gctgcacaca 200
 aacctgtgat ttccgtccat cctccatgga ccacattctt caaaggagag 250
 agagtgactc tgacttgcaa tggatttcag ttctatgcaa cagagaaaac 300
 aacatggtat catcggcact actggggaga aaagttgacc ctgaccccag 350
 gaaacaccct cgaggttcgg gaatctggac tgtacagatg ccaggcccgg 400
 ggctccccac gaagtaacct tgtgcgcttg ctcttttctt cagactcctt 450
 aatcctgcag gcacatatt ctgtgtttga aggtgacaca ttggttctga 500
 gatgccacag aagaaggaaa gagaaattga ctgctgtgaa atatacttgg 550

aatggaaaca ttctttccat ttctaataaa agctgggatc ttcttatccc 600
acaagcaagt tcaaataaca atggcaatta tcgatgcatt ggatatggag 650
atgagaatga tgtattttaga tcaaatttca aaataattaa aattcaagaa 700
ctatttccac atccagagct gaaagctaca gactctcagc ctacagaggg 750
gaattctgta aacctgagct gtgaaacaca gcttcctcca gagcggtcag 800
acacccccact tcacttcaac ttcttcagag atggcgaggt catcctgtca 850
gactggagca cgtacccgga actccagctc ccaaccgtct ggagagaaaa 900
ctcaggatcc tattggtgtg gtgctgaaac agtgaggggt aacatccaca 950
agcacagtcc ctgctacag atccatgtgc agcggatccc tgtgtctggg 1000
gtgctcctgg agaccagcc ctcagggggc caggctgttg aaggggagat 1050
gctggtcctt gtctgctccg tggctgaagg cacaggggat accacattct 1100
cctggcaccg agaggacatg caggagagtc tggggaggaa aactcagcgt 1150
tccttgagag cagagctgga gctccctgcc atcagacaga gccatgcagg 1200
gggatactac tgtacagcag acaacagcta cggccctgtc cagagcatgg 1250
tgctgaatgt cactgtgaga gagacccag gcaacagaga tggccttgtc 1300
gccgcgggag ccaactggagg gctgctcagt gctcttctcc tggctgtggc 1350
cctgctgttt cactgctggc gtcggaggaa gtcaggagtt ggtttcttgg 1400
gagacgaaac caggctccct cccgctccag gccaggaga gtctcccat 1450
tccatctgcc ctgcccaggt ggagcttcag tcgttgatg ttgatgtaca 1500
ccccaaaaag ggagatttgg tatactctga gatccagact actcagctgg 1550
gagaagaaga ggaagctaac acctccagga cacttctaga ggataaggat 1600
gtctcagttg tctactctga ggtaaagaca caacaccag ataactcagc 1650
tggaaagatc agctctaagg atgaagaaag ttaagagaat gaaaagttac 1700
gggaacgtcc tactcatgtg atttctccct tgtccaaagt cccaggccca 1750
gtgcagtcct tgcggcacct ggaatgatca actcattcca gctttctaata 1800
tcttctcatg catatgcatt cactcccagg aatactcatt cgtctactct 1850
gatgttggga tggaatggcc tctgaaagac ttcactaaaa tgaccaggat 1900
ccacagttaa gagaagaccc tgtagtattt gctgtgggcc tgacctaatg 1950
cattccctag ggtctgcttt agagaagggg gataaagaga gagaaggact 2000

gttatgaaaa acagaagcac aaattttggg gaattgggat ttgcagagat 2050
 gaaaaagact gggtgacctg gatctctgct taatacatct acaaccattg 2100
 tctcactgga gactcacttg catcagtttg tttaactgtg agtggctgca 2150
 caggcactgt gcaaacaatg aaaagcccct tcacttctgc ctgcacagct 2200
 tacactgtca ggattcagtt gcagattaaa gaacccatct ggaatggttt 2250
 acagagagag gaatttaaaa gaggacatca gaagagctgg agatgcaagc 2300
 tctaggctgc gcttcacaaa gcaaatgata attatgttaa tgtcattagt 2350
 gacaaagatt tgcaacatta gagaaaagag acacaaatat aaaattaaaa 2400
 acttaagtac caactctcca aaactaaatt tgaacttaaa atattagtat 2450
 aaactcataa taaactctgc ctttaaaaaa agataaatat ttcttacgtc 2500
 tgttcactga aataattacc aacccttag caataagcac tccttgaga 2550
 gaggttttat tctctaaata ccattccctt ctcaaaggaa ataaggttgc 2600
 ttttcttgta ggaactgtgt ctttgagtta ctaattagtt tatatgagaa 2650
 taattcttgc aataaatgaa gaaggaataa aagaaatagg aagccacaaa 2700
 tttgtatgga tatttcatga tacacctact ggtaaataa ttgacaaaaa 2750
 ccagcagcca aatattagag gtctcctgat ggaagtgtac aataccacct 2800
 acaaatatc catgccccaa gtgttaaaac tgaatccatt caagtctttc 2850
 taactgaata cttgttttat agaaaatgca tggagaaaag gaatttgttt 2900
 aaataacatt atgggattgc aaccagcaaa acataaactg agaaaaagtt 2950
 ctatagggca aatcacctgg cttctataac aaataaatgg gaaaaaatg 3000
 aaataaaaag aagagaggga ggaagaaagg gagagagaag aaaagaaaaa 3050
 tgaagaaaag taattagaat attttcaaca taaagaaaag acgaatattt 3100
 aagggtgacag atatccaac tacgctgatt tgatctttac aaattatatg 3150
 agtgtatgaa tttgtcacat gtatcacccc caaaaaaga gaaaaagaaa 3200
 aatagaagac atataaatta aatgagacga gacatgtcga ccaaaggaa 3250
 tgtgtgggtc ttgtttggat cctgactcaa attaagaaaa aataaaacta 3300
 cctacgaaat actaagaaaa atttgatatac taatattaag aaattgttgt 3350
 gtgttttgga tataagtgat agtttattgt agtgatgttt ttataaaagc 3400
 aaaaggatat tcactttcag cgcttatact gaagtattag attaaagctt 3450

attaacgta 3459

<210> 9

<211> 1869

<212> DNA

<213> Homo sapiens

<400> 9

```
gccgagctga gcggatcctc acatgactgt gatccgattc tttccagcgg 50
cttctgcaac caagcgggtc ttacccccgg tcctccgcgt ctccagtcct 100
cgcacctgga accccaacgt ccccgagagt ccccgaaatcc ccgctcccag 150
gctacctaaag aggatgagcg gtgctccgac ggccgggggca gccctgatgc 200
tctgcgccgc caccgccgtg ctactgagcg ctgagggcgg acccgtgcag 250
tccaagtcgc cgcgcttttg gtcctgggac gagatgaatg tcctggcgca 300
cggactcctg cagctcggcc aggggctgcg cgaacacgcg gagcgcaccc 350
gcagtcagct gagcgcgctg gagcggcgcc tgagcgcgtg cgggtccgcc 400
tgtcagggaa ccgaggggtc caccgacctc ccgttagccc ctgagagccg 450
ggtggaccct gaggtccttc acagcctgca gacacaactc aaggctcaga 500
acagcaggat ccagcaactc ttccacaagg tggcccagca gcagcggcac 550
ctggagaagc agcacctgcg aattcagcat ctgcaaagcc agtttggcct 600
cctggaccac aagcacctag accatgaggt ggccaagcct gccgaagaa 650
agaggtgcc cgagatggcc cagccagttg acccgggtca caatgtcagc 700
cgctgcacc ggctgcccag ggattgccag gagctgttcc aggttgggga 750
gaggcagagt ggactatttg aaatccagcc tcaggggtct ccgccatttt 800
tggatgaactg caagatgacc tcagatggag gctggacagt aattcagagg 850
cgccacgatg gctcagtggc cttcaaccgg ccctgggaag cctacaaggc 900
ggggtttggg gatccccacg gcgagttctg gctgggtctg gagaagggtc 950
atagcatcac gggggaccgc aacagccgcc tggccgtgca gctgcgggac 1000
tgggatggca acgccagatt gctgcagttc tccgtgcacc tgggtggcga 1050
ggacacggcc tatagcctgc agctcactgc acccgtggcc ggccagctgg 1100
gcgccaccac cgtcccacc agcggcctct ccgtaccctt ctccacttgg 1150
gaccaggatc acgacctccg cagggacaag aactgcgcca agagcctctc 1200
tggaggctgg tggtttggca cctgcagcca ttccaacctc aacggccagt 1250
```

acttccgctc catccacag cagcggcaga agcttaagaa gggaatcttc 1300
 tggagacct ggcggggccg ctactacccg ctgcaggcca ccaccatgtt 1350
 gatccagccc atggcagcag aggcagcctc ctagcgtcct ggctgggcct 1400
 ggtcccaggc ccacgaaaga cggtgactct tggctctgcc cgaggatgtg 1450
 gccgttccct gcctgggcag gggctccaag gaggggcat ctggaaactt 1500
 gtggacagag aagaagacca cgactggaga agcccccttt ctgagtgcag 1550
 gggggctgca tgcgttgctt cctgagatcg aggcctgcagg atatgctcag 1600
 actctagagg cgtggaccaa ggggcatgga gcttcaactc ttgctggcca 1650
 gggagttggg gactcagagg gaccacttgg ggccagccag actggcctca 1700
 atggcggact cagtcacatt gactgacggg gaccagggtt tgtgtgggtc 1750
 gagagcggcc tcatgggtgct ggtgctgttg tgtgtaggct ccctggggac 1800
 acaagcaggc gccaatggta tctgggcgga gctcacagag ttcttgggaat 1850
 aaaagcaacc tcagaacac 1869

<210> 10
 <211> 685
 <212> DNA
 <213> Homo sapiens

<400> 10
 gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50
 caaacctgtt ttggaattga ggaaacttct cttttgatct cagcccttgg 100
 tgggtccagg ctatcatgctg ctgtgggtga tattactggt cctggctcct 150
 gtcagtggac agtttgcaag gacaccagc cccattattt tcctccagcc 200
 tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250
 gatttcgctt ctactacca cagaaaacaa aatggtacca tcggtacctt 300
 gggaaagaaa tactaagaga aacccagac aatatacctg aggttcagga 350
 atctggagag tacagatgcc agggccaggg ctcccccttc agtagccctg 400
 tgcacttggg tttttcttca gagatgggat ttcctcatgc tgcccaggct 450
 aatgttgaac tcctgggctc aagtgatctg ctcacctagg cctctcaaag 500
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550
 aaggagactc tgtggttctg aggtgccggg caaaggcggg agtaacactg 600
 aataatacta ttacaagaa tgataatgtc ctggcattcc ttaataaaag 650

aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 11

<211> 5645

<212> DNA

<213> Homo sapiens

<400> 11

cgcccgcgcg ctgcagcccc atctcctagc ggcagcccag gcgcggaggg 50
agcgagtccg ccccgaggta ggtccaggac gggcgcacag cagcagccga 100
ggctggccgg gagagggagg aagaggatgg cagggccacg cccagccca 150
tgggccaggc tgctcctggc agccttgatc agcgtcagcc tctctgggac 200
cttggcaaac cgctgcaaga agggcccagt gaagagctgc acggagtgtg 250
tccgtgtgga taaggactgc gcctactgca cagacgagat gttcagggac 300
cggcgctgca acaccaggc ggagctgctg gccgcgggct gccagcggga 350
gagcatcgtg gtcattggaga gcagcttcca aatcacagag gagaccaga 400
ttgacaccac cctgcggcgc agccagatgt cccccaagg cctgcgggtc 450
cgtctgcccc ccggtgagga gcggcatttt gagctggagg tgtttgagcc 500
actggagagc cccgtggacc tgtacatcct catggacttc tccaactcca 550
tgtccgatga tctggacaac ctcaagaaga tggggcagaa cctggctcgg 600
gtcctgagcc agctcaccag cgactacact attggatttg gcaagtttgt 650
ggacaaagtc agcgtccgcg agacggacat gaggcctgag aagctgaagg 700
agccctggcc caacagtgc ccccccttct ccttcaagaa cgtcatcagc 750
ctgacagaag atgtggatga gttccggaat aaactgcagg gagagcggat 800
ctcaggcaac ctggatgctc ctgagggcgg cttcgatgcc atcctgcaga 850
cagctgtgtg cacgagggac attggctggc gcccgacag caccacctg 900
ctggtcttct ccaccgagtc agccttccac tatgaggctg atggcgccaa 950
cgtgctggct ggcatcatga gccgcaacga tgaacgggtg cacctggaca 1000
ccacgggcac ctacaccag tacaggacac aggactaccg gtcggtgccc 1050
accctggtgc gcctgctcgc caagcacaac atcatcccca tctttgctgt 1100
caccaactac tcctatagct actacgagaa gcttcacacc tatttccctg 1150
tctctcact gggggtgctg caggaggact cgtccaacat cgtggagctg 1200
ctggaggagg cttcaatcg gatccgctcc aacctggaca tccgggccct 1250

agacagcccc cgaggccttc ggacagaggt cacctccaag atgttccaga 1300
 agacgaggac tgggtccttt cacatccggc ggggggaagt gggatatatac 1350
 cagggtgcagc tgcgggccct tgagcacgtg gatgggacgc acgtgtgcca 1400
 gctgccggag gaccagaagg gcaacatcca tctgaaacct tccttctccg 1450
 acggcctcaa gatggacgcg ggcatcatct gtgatgtgtg cacctgcgag 1500
 ctgcaaaaag aggtgcggtc agctcgctgc agcttcaacg gagacttcgt 1550
 gtgcggacag tgtgtgtgca gcgagggctg gaggggccag acctgcaact 1600
 gctccaccgg ctctctgagt gacattcagc cctgcctgcg ggagggcgag 1650
 gacaagccgt gctccggccg tggggagtgc cagtgcgggc actgtgtgtg 1700
 ctacggcgaa ggccgctacg agggtcagtt ctgcgagtat gacaacttcc 1750
 agtgtccccg cacttccggg ttctctgca atgaccgagg acgctgctcc 1800
 atgggccagt gtgtgtgtga gcctggttgg acaggcccaa gctgtgactg 1850
 tcccctcagc aatgccacct gcatcgacag caatgggggc atctgtaatg 1900
 gacgtggcca ctgtgagtggt ggccgctgcc actgccacca gcagtcgctc 1950
 tacacggaca ccattctgca gatcaactac tcggcgatcc acccgggcct 2000
 ctgcgaggac ctacgctcct gcgtgcagtg ccaggcgtgg ggcaccggcg 2050
 agaagaaggg gcgcacgtgt gaggaatgca acttcaaggt caagatggtg 2100
 gacgagctta agagagccga ggaggtggtg gtgcgctgct ccttccggga 2150
 cgaggatgac gactgcacct acagctacac catggaaggt gacggcgccc 2200
 ctgggccccaa cagcactgtc ctggtgcaca agaagaagga ctgccctccg 2250
 ggctccttct ggtggctcat cccctgctc ctctcctcc tgccgctcct 2300
 ggccctgcta ctgctgctat gctggaagta ctgtgcctgc tgcaaggcct 2350
 gcctggcact tctcccgtgc tgcaaccgag gtcacatggt gggctttaag 2400
 gaagaccact acatgctgcg ggagaacctg atggcctctg accacttga 2450
 cacgcccatt ctgcgcagcg ggaacctcaa gggccgtgac gtggtccgct 2500
 ggaaggtcac caacaacatg cagcggcctg gctttgccac tcatgccgcc 2550
 agcatcaacc ccacagagct ggtgccctac gggctgtcct tgcgcctggc 2600
 ccgcctttgc accgagaacc tgctgaagcc tgacactcgg gagtgcgccc 2650
 agctgcgcca ggaggtggag gagaacctga acgaggtcta caggcagatc 2700

tccggtgtac acaagctcca gcagaccaag ttccggcagc agcccaatgc 2750
cgggaaaaag caagaccaca ccattgtgga cacagtgtg atggcgcccc 2800
gctcggccaa gccggccctg ctgaagctta cagagaagca ggtggaacag 2850
agggccttcc acgacctcaa ggtggccccc ggctactaca ccctcactgc 2900
agaccaggac gcccggggca tgggtggagt ccaggagggc gtggagctgg 2950
tggtacgtac ggtgcccctc tttatccggc ctgaggatga cgacgagaag 3000
cagctgtctg tggaggccat cgactgtccc gcaggcactg ccaccctcgg 3050
ccgccgcctg gtaaacaatca ccatcatcaa ggagcaagcc agagacgtgg 3100
tgtcctttga gcagcctgag ttctcggta gccgcgggga ccaggtggcc 3150
cgcatccctg tcatccggcg tgtcctggac ggcgggaagt ccaggtctc 3200
ctaccgcaca caggatggca ccgcgcaggg caaccgggac tacatccccg 3250
tggagggatga gctgtgttc cagcctgggg aggcctggaa agagctgcag 3300
gtgaagctcc tggagctgca agaagttgac tccctcctgc ggggcccga 3350
ggtccgcctg ttccacgtcc agctcagcaa ccctaagttt ggggcccacc 3400
tgggccagcc ccactccacc accatcatca tcagggaccc agatgaactg 3450
gaccggagct tcacgagtca gatgttgtca tcacagccac cccctcacgg 3500
cgacctgggc gcccgcaga accccaatgc taaggccgct ggggccagga 3550
agatccattt caactggctg cccccttctg gcaagccaat ggggtacagg 3600
gtaaagtact ggattcaggg tgactccgaa tccgaagccc acctgctcga 3650
cagcaaggatg ccctcagtgg agctcaccaa cctgtacccg tattgctgact 3700
atgagatgaa ggtgtgcgcc tacggggctc agggcgaggg accctacagc 3750
tccctgggtg cctgccgcac ccaccaggaa gtgccagcg agccagggcg 3800
tctggccttc aatgtcgtct cctccacggg gaccagctg agctgggctg 3850
agccggctga gaccaacggg gagatcacag cctacgaggt ctgctatggc 3900
ctgggtcaacg atgacaaccg acctattggg cccatgaaga aagtgtggt 3950
tgacaaccct aagaaccgga tgctgcttat tgagaacctt cgggagctcc 4000
agccctaccg ctacacggg aaggcgcgca acggggccgg ctgggggcct 4050
gagcgggagg ccatcatcaa cctggccacc cagcccaaga ggcccatgtc 4100
catccccatc atccctgaca tccctatcgt ggacgcccag agcggggagg 4150

actacgacag cttccttatg tacagcgatg acgttctacg ctctccatcg 4200
 ggcagccaga ggcccagcgt ctccgatgac actgagcacc tggatgaatgg 4250
 cccgatggac tttgccttcc cgggcagcac caactccctg cacaggatga 4300
 ccacgaccag tgctgctgcc tatggcacc acctgagccc acacgtgccc 4350
 caccgcgtgc taagcacatc ctccaccctc acacgggact acaactcact 4400
 gacccgctca gaacactcac actcgaccac actgccgagg gactactcca 4450
 ccctcacctc cgtctcctcc cacgactctc gcctgactgc tggatgtgccc 4500
 gacacgccc cccgcctggg gttctctgcc ctggggccca catctctcag 4550
 agtgagctgg caggagccgc ggtgcgagcg gccgctgcag ggctacagtg 4600
 tggagtacca gctgctgaac ggcggtgagc tgcacgggct caacatcccc 4650
 aaccctgccc agacctcggg ggtggtggaa gacctcctgc ccaaccactc 4700
 ctacgtgttc cgcgtgcggg cccagagcca ggaaggctgg ggccgagagc 4750
 gtgagggtgt catcaccatt gaatcccagg tgcacccgca gagccactg 4800
 tgtccctgc caggctccgc cttcactttg agcactcca gtgccccagg 4850
 cccgctgggt ttcactgccc tgagcccaga ctgctgcag ctgagctggg 4900
 agcggccacg gagggccaat ggggatatcg tcggctacct ggtgacctgt 4950
 gagatggccc aaggaggagg gccagccacc gcattccggg tggatggaga 5000
 cagccccgag agccggctga ccgtgccggg cctcagcgag aacgtgccct 5050
 acaagttcaa ggtgcaggcc aggaccactg agggcttcgg gccagagcgc 5100
 gagggcatca tcaccataga gtcccaggat ggaggaccct tcccgcagct 5150
 gggcagccgt gccgggctct tccagacccc gctgcaaagc gactacagca 5200
 gcatcaccac caccacacc agcgccaccg agcccttcct agtggatggg 5250
 ccgaccctgg gggcccagca cctggaggca ggcggtccc tcaccggca 5300
 tgtgaccag gagtttgtga gccggacact gaccaccagc ggaaccctta 5350
 gcaccacat ggaccaacag ttcttccaaa cttgaccgca ccctgcccc 5400
 cccccgcat gtccactag gcgtcctccc gactcctctc ccggagcctc 5450
 ctgagctact ccctccttgc acccctgggg gccagccca cccgcatgca 5500
 cagagcaggg gctaggtgtc tcctgggagg catgaagggg gcaaggtccg 5550
 tcctctgtgg gcccaaactc atttgtaacc aaagagctgg gagcagcaca 5600

aggacccagc ctttgttctg cacttaataa atggttttgc tactg 5645

<210> 12

<211> 4381

<212> DNA

<213> Homo sapiens

<400> 12

gccttcaact accatcccac cacctgctga ggagaaaaat tcttcaagac 50
tcagagcaca cagccagcac cagaggcccc atgaccctgg acagaccagg 100
ggagggggcc accatgctga agacattcac tgttttgctc ttttgcattc 150
ggatgagtct gggatatgaca tcgatagtga tggaccctca accggagttg 200
tggatagagt ccaactaccc ccaggcccct tgggagaaca tcacgctttg 250
gtgccgaagc ccctctcgga tatcaagcaa gttcctgctg ctgaaggata 300
agacacaaat gacctggatc cgcccttccc acaagacctt ccaagtttca 350
ttccttatag gtgcccttac tgagtccaat gcaggctctt accggtgctg 400
ctactggaag gagacaggct ggtcaaagcc cagtaaagtt ctagagttgg 450
aggcaccagg ccaactgccc aagcccctct tctggattca ggctgagacc 500
cccgtcttct ctgggtgtaa tgttaacatc ctctgccatg gctggctgca 550
ggatttggtg ttcattgctgt ttaaagaggg atatgcagag cctgtggatt 600
accaagtccc aactgggaca atggccatat tctccattga caacctgaca 650
cctgaggatg aaggggttta catctgccgc actcatatcc agatgctccc 700
caccctgtgg tcagagccca gcaaccccct gaagctgggt gtagcaggac 750
tctaccccaa accaactttg acagcccac ctggggcccat catggcacct 800
ggagaaagcc tgaatctcag gtgccaaggg ccaatctatg gaatgacctt 850
tgctctaata agggttgaag acttgagaaa gtccttttac cacaagaaga 900
caataaaaaa tgaggcaaat ttcttcttcc agtctttgaa gatccaagat 950
actggacatt acctctgttt ttactatgac gcatcatata gaggttcact 1000
ccttagtgat gtcctgaaaa tctgggtaac tgacactttc cccaagacct 1050
ggctacttgc tcggcccagt gctgtgggtc aaatgggtca gaatgtgagc 1100
ctacggtgtc gaggaccagt ggatggagtg ggtcttgac tctataagaa 1150
aggagaagac aaaccacttc aatttttggg tgccaccagc atcgatgaca 1200
acacatcatt cttcctcaac aatgtaacct acagtgatac tggcatctat 1250

agctgccact atcttctcac ctggaagacc tccattagga tgccatcaca 1300
 caacactgtg gagcttatgg ttgtagataa gccccccaaa ccctccctgt 1350
 cagcttggcc aagcactgtg ttcaagctag gaaaggccat cacccttcag 1400
 tgccgagtat ctcatccagt actggaattt tctctggaat gggaagaaag 1450
 agaaacattc caaagattct cagtaaacgg agacttcatc atcagtaatg 1500
 ttgacgggaa aggcacaggg acctacagtt gcagctatcg cgtagagaca 1550
 catcctaaca tgtggtcaca tgcagtgag ccctgaagc tgatggggcc 1600
 agcaggctat ctcacctgga attacgttct gaatgaagct atcaggttgt 1650
 ctctaatacat gcagcttggt gccttgctgt tggtagtgct gtggataagg 1700
 tggaaagtgc ggagactcag aatcagagaa gcctggttgc tgggaacagc 1750
 tcaaggggtc accatgctct tcatagtcac ggcccttctc tgctgtggac 1800
 tgtgcaatgg ggtattgata gaagagactg aaatagtcac gccaaccct 1850
 aagcctgagc tgtgggcaga gaccaacttt cctctggccc cgtggaagaa 1900
 cttaaccctc tgggtgcagaa gcccttctgg ctcaactaag gagtttgtgt 1950
 tgctgaagga tgggaccggg tggatcgcca ctgcccggc ctgagagcag 2000
 gtccgggctg ccttccccct tggcgccctg acccagagcc acaccgggag 2050
 ctaccactgc cattcatggg aggagatggc tgtatcgag cccagtgagg 2100
 cacttgagct ggtggggaca gacatcctcc ccaaactgt catttctgct 2150
 tccccacaa tccggggcca ggaactacaa ctccggtgca aaggatggct 2200
 ggcaggcatg gggtttgctc tgtataagga gggagagcaa gaacctgtcc 2250
 agcaacttgg tgctgttga agagaagcct tctttacaat ccagagaatg 2300
 gaggataaag acgaaggcaa ttacagctgc cgactcaca ctgaaaaact 2350
 ccccttcaag tggctgagc ccagtgagcc gctggagctt gtcataaaag 2400
 aaatgtaccc taagcccttc ttcaagacat gggccagccc tgtggtcacc 2450
 cctggtgccc gagtgacttt caattgctcc acccccacc agcatatgag 2500
 ctttattctt tacaaagatg gaagtgaat agcatccagt gacaggctct 2550
 gggcaagtcc gggggccagt gcagctcact ttctaatacat ttcggtgggc 2600
 attggtgatg gagggaatta cagctgccga tattatgact tttctatctg 2650
 gtctgagccc agcgaccctg tggagctcgt ggtgacagaa ttctaccca 2700

aaccactct cctggcacag ccaggtcctg tgggtgttcc tgggaagagt 2750
gtgatcctgc gctgccaagg gactttccag ggcatagagt tcgccctctt 2800
gcaggaggga gcccatgttc ccttacagtt tcggagtgtc tcagggaact 2850
cagctgactt ccttctccac actggttgag cagaggactc tgggaactat 2900
agctgtatct actatgagac aaccatgtca aacagggggt catatctcag 2950
tatgccccct atgatctggg tgactgacac attccctaag ccatgggttg 3000
ttgctgagcc cagttctgtg gttcccatgg ggcagaatgt tactctctgg 3050
tgccgagggc cgggccatgg agtaggatac attctgcaca aagaaggaga 3100
agccacttca atgcagctct ggggatccac cagtaatgac ggggcattcc 3150
ccatcaccaa tatatctggg actagcatgg ggcgttacag ctgctgctac 3200
caccctgact ggaccagttc tatcaagata caacctagca acaccctga 3250
actcctagtc acaggcttac tccccaaacc cagcctatta gccagcctg 3300
gtcccatggg gggccctggc gaaaatatga ctcttcagtg tcaaggggaa 3350
ctgccagact caacatttgt gctgttgaag gagggggctc aggagccttt 3400
agagcaacag aggccaagtg ggtacagggc tgacttctgg atgccagcag 3450
tgagaggtga agactctggg atctatagct gtgtttatta tttggactct 3500
actccctttg cagcttcaaa tcacagtgc tccctggaga tctgggtgac 3550
tgataagccc cctaaaccct ctctgtcagc ctggcccagc accatgttca 3600
agttagggaa ggacatcacc cttcagtgcc gaggaccct gccaggtgtt 3650
gaatttgttc tagaacatga tggagaagaa gcacctcagc agttttcaga 3700
ggatggagac tttgtcatca acaacgtaga aggaaaaggc attggaaact 3750
acagctgcag ctaccgcctc caggcctacc ctgatatctg gtcagagcct 3800
agtgatcccc tggagctggg gggggcagca gggcctgttg ctcaggagt 3850
cactgtaggg aacattgtcc gaagtagcct aatcgtgggt gttgtttag 3900
ccttgggggt agtgctagcc atagagtga agaagtggcc tcgactgca 3950
accagaggct cagagacaga cggaagagac cagaccattg cccttgaaga 4000
gtgtaaccaa gaaggagaac caggcaccct tgccaattct ccttcatcaa 4050
cctctcagag aatctctgtg gaactgcccg ttccaatata ataatctcct 4100
cctttacaag agctttcctc tcctctctct tgctctcaga gacctataaa 4150

tccaaccagt taccctgcaa gtcagcccca tctgctgttc cttggtctct 4200
aatcacctga gctgggtaaa ggggattctg ggagttgaga gctctgccag 4250
ggtagatgt ttctgaaga gaggttcccc acccctgtaa ctctcactg 4300
tactgattta ctggcgcag aaattctatt aaaaatgcat tcttctgaat 4350
aaaaagagta ttcactattt aacttcaatt t 4381

<210> 13
<211> 1068
<212> DNA
<213> Homo sapiens

<400> 13
cgccggagga gttctgcgtc tcggggtggt gactgggtcc agaatggctt 50
eggattcggg gaaccagggg accctctgca cgttggagtt cgcggtgcag 100
atgacctgtc agagctgtgt ggacgcggtg cgcaaattccc tgcaaggggt 150
ggcaggtgtc caggatgtgg aggtgcactt ggaggaccag atggtcttgg 200
tacacaccac tctaccagc caggaggtgc aggctctcct ggaaggcacg 250
gggcggcagg cgggtactcaa gggcatgggc agcggccagt tgcagaatct 300
gggggcagca gtggccatcc tgggggggccc tggcaccgtg cagggggtgg 350
tgcgttctct acagctgacc cctgagcgct gcctcatcga gggaactatt 400
gacggcctgg agcctgggct gcatggactc cacgtccatc agtacgggga 450
ccttacaac aactgcaaca gctgtgggaa tcaatttaac cctgatggag 500
catctcatgg gggccccag gactctgacc ggcaccgcgg agacctgggc 550
aatgtccgtg ctgatgctga cggccgcgcc atcttcagaa tggaggatga 600
gcagctgaag gtgtgggatg tgattggccg cagcctgatt attgatgagg 650
gagaagatga cctgggcccg ggaggccatc ccttatccaa gatcacaggg 700
aactccgggg agaggttggc ctgtggcatc attgcacgct ccgctggcct 750
tttccagaac cccaagcaga tctgctcttg cgatggcctc accatctggg 800
aggagcgagg ccggcccatc gctggcaagg gccgaaagga gtcagcgag 850
ccccctgcc acccttgagc aggacctcac cttggctctg ttgctgtcct 900
ccagggcgag cactttccac ttccagaggg ggccagaggg actttgcctg 950
cccagtcttt ggagagctca gtacagggca ggagctgctg tgggtgtccc 1000
ttggcaaagt aaagttttat tttcgtttgg gaaaaaaaaa aaaaaaaaaa 1050

aaaaaaaaaa aaaaaaaaa 1068

<210> 14

<211> 2402

<212> DNA

<213> Homo sapiens

<220>

<221> Unsure

<222> 2138

<223> Unknown base

<400> 14

ggagaggtgc gggccgaatc cgagccgagc gagaggaatc cggcagtaga 50
gagcggactc cagccggcgg accctgcagc cctcgcctgg gacagcggcg 100
cgctgggcag ggcaccaaga gagcatcgag cagcgggaacc cgcgaagccg 150
gcccgcagcc gcgaccgcg cagcctgccg ctctcccgcg gccggtccgg 200
gcagcatgag gcgcgcggcg ctctggctct ggctgtgcgc gctggcgctg 250
agcctgcagc tggccctgcc gcaaattgtg gctactaatt tgccccctga 300
agatcaagat ggctctgggg atgactctga caacttctcc ggctcaggtg 350
caggtgcttt gcaagatatc accttgtcac agcagacccc ctccacttgg 400
aaggacacgc agctcctgac ggctattccc acgtctccag aaccacccgg 450
cctggaggct acagctgcct ccacctccac cctgccggct ggagaggggc 500
ccaaggaggg agaggctgta gtcctgccag aagtggagcc tggcctcacc 550
gcccgggagc aggaggccac ccccccagcc agggagacca cacagctccc 600
gaccactcat caggcctcaa cgaccacagc caccacggcc caggagcccc 650
ccacctccca cccccacagg gacatgcagc ctggccacca tgagacctca 700
accctgcag gaccagcca agctgacctt cacactcccc acacagagga 750
tgagggtcct tctgccaccg agagggctgc tgaggatgga gcctccagtc 800
agctcccagc agcagagggc tctggggagc aggacttcac ctttgaaacc 850
tcgggggaga atacggctgt agtggccgtg gagcctgacc gccggaacca 900
gtccccagtg gatcaggggg ccacgggggc ctcacagggc ctctggaca 950
ggaaagaggt gctgggaggg gtcattgccg gaggcctcgt ggggctcatc 1000
tttgctgtgt gcctggtggg tttcatgctg taccgcatga agaagaagga 1050
cgaaggcagc tactccttgg aggagccgaa acaagccaac ggcggggcct 1100
accagaagcc caccaaacag gaggaattct atgcctgacg cgggagccat 1150

gcgccccctc cgccctgcc a ctactaggc cccacttgc ctcttcttg 1200
 aagaactgca ggccttgcc tcccttgcca ccaggccacc tccccagcat 1250
 tccagccccct ctggctgctc ctgcccacgg agtcgtgggt gtgctgggag 1300
 ctccactctg cttctctgac ttctgcctgg agacttaggg caccagggtt 1350
 ttctcgcata ggacctttcc accacagcca gcacctggca tcgcaccatt 1400
 ctgactcggg ttctccaaac tgaagcagcc tctccccagg tccagctctg 1450
 gaggggaggg ggatccgact gctttggacc taaatggcct catgtggctg 1500
 gaagatctgc ggggtggggct tggggctcac acacctgtag cacttactgg 1550
 taggaccaag catcttgggg ggggtggcgc tgagtggcag ggacaggagt 1600
 cactttgttt cgtggggagg tctaacttag atatcgactt gtttttgcac 1650
 atgtttcctc tagttctttg ttcatagccc agtagacctt gttacttctg 1700
 aggtaagtta agtaagttga ttcggtatcc ccccatcttg cttccctaata 1750
 ctatggctcg gagacagcat cagggttaag aagacttttt tttttttttt 1800
 ttaaaactagg agaaccaaat ctggaagcca aaatgtaggc ttagtttgtg 1850
 tgttgtctct tgagtttgtc gctcatgtgt gcaacagggt atggactatc 1900
 tgtctggtgg ccccgtttct ggtggtctgt tggcaggctg gccagtccag 1950
 gctgccgtgg ggccgccgcc tctttcaagc agtcgtgcct gtgtccatgc 2000
 gctcagggcc atgctgaggg ctggggcgcct gccacgttgg agaagcccgt 2050
 gtgagaagtg aatgctggga ctcagccttc agacagagag gactgtaggg 2100
 agggcgccag gggcctggag atcctcctgc agaccacncc cgtcctgcct 2150
 gtgcgccgtc tccaggggct gcttctcctt ggaaattgac gaggggtgtc 2200
 ttgggcagag ctggctctga gcgcctccat ccaaggccag gttctccgtt 2250
 agctcctgtg gccccaccct gggccctggg ctggaatcag gaatattttc 2300
 caaagagtga tagtcttttg cttttggcaa aactctactt aatccaatgg 2350
 gtttttccct gtacagtaga ttttccaaat gtaataaact ttaatatataa 2400
 gt 2402

<210> 15
 <211> 1145
 <212> DNA
 <213> Homo sapiens
 <400> 15

gctccggcca gccgcggtcc agagcgcgcg aggttcgggg agctccgcca 50
ggctgctggt acctgcgtcc gcccggcgag caggacaggc tgctttggtt 100
tgtgacctcc aggcaggacg gccatcctct ccagaatgaa gatcttcttg 150
ccagtgcgtc tggctgccct tctgggtgtg gagcgagcca gctcgctgat 200
gtgcttctcc tgcttgaacc agaagagcaa tctgtactgc ctgaagccga 250
ccatctgtc cgaccaggac aactactgcg tgactgtgtc tgctagtgcc 300
ggcattggga atctcgtgac atttggccac agcctgagca agacctgttc 350
cccgccctgc cccatcccag aaggcgtcaa tgttggtgtg gcttccatgg 400
gcatcagctg ctgccagagc tttctgtgca atttcagtgc ggccgatggc 450
gggtgcgggg caagcgtcac cctgctgggt gccgggctgc tgctgagcct 500
gctgccggcc ctgctgcggt ttggcccctg accgccaga ccctgtcccc 550
cgatccccca gctcaggaag gaaagcccag ccctttctgg atcccacagt 600
gtatgggagc ccctgactcc tcacgtgcct gatctgtgcc cttggtccca 650
ggtcaggccc accccctgca cctccacctg cccagcccc tgccctctgcc 700
caagtgggccc agctgccctc acttctgggg tggatgatgt gaccttcctt 750
gggggactgc ggaagggacg agggttccct ggagtcttac ggtccaacat 800
cagaccaagt cccatggaca tgctgacagg gtccccagg agaccgtgtc 850
agtagggatg tgtgcctggc tgtgtacgtg ggtgtgcagt gcacgtgaga 900
gcacgtggcg gcttctgggg gccatgtttg gggagggagg tgtgccagca 950
gcctggagag cctcagtccc ttagcccc tgccctggca cagctgcatg 1000
cacttcaagg gcagcctttg ggggttgggg tttctgccac ttccgggtct 1050
aggccctgcc caaatccagc cagtctgcc ccagcccacc cccacattgg 1100
agccctcctg ctgctttggt gcctcaaata aatacagatg tcccc 1145

<210> 16

<211> 1743

<212> DNA

<213> Homo sapiens

<400> 16

cagcaggtca cagcccctcg aggcgacagc ggccccgccg caccagagca 50
gtggtacagg catggatggg aagaaatgca gcgtatggat gttcctacct 100
cttgtattta ctttgtttac ttcagctgga ttgtggatag tatacttcat 150

agctgtggaa gatgacaaaa ttttaccatt aaattcagct gaaaggaaac 200
 ctggtgtgaa gcatgcacca tatataagca ttgcaggtga tgatcctcct 250
 gcaagctgtg tgtttagtca agttatgaac atggcagcct tcctagccct 300
 tgtggtagct gttctgcgct tcatacaact gaaaccgaag gttttaaac 350
 cgtggctgaa tattagtga ttggtggctc tgtgtctggc ttccttcgga 400
 atgaccttac ttggaattt tcagctcaca aatgatgaag aaatccataa 450
 cgtcggaaact tccttgacct ttggatttgg cacattgacc tgctggatcc 500
 aggctgcgct gacactcaag gtcaacatca agaataaggg acggagagtt 550
 ggaattccac gggttattct gtcggcatct atcactctct gtgtggctcct 600
 ctacttcac ctcattggccc aaagcatcca catgtatgca gccagggctcc 650
 agtggggcct ggtcatgtgc ttcctgtcct attttggcac ctttgccgtg 700
 gagttccggc attaccgcta tgagattgtt tgctctgagt accaggagaa 750
 tttcctaagc ttctcagaaa gcctgtcaga agcttctgaa tatcagactg 800
 accaggtgta aaccatcagt ttttccttgc tgggtgaggtg ggtgtgacag 850
 tgggggaggg gccagtagga cacttcaca ggacttgaca tagaacctca 900
 tttcacacac acacacacac acacattcat ggccacattt gccaaatgag 950
 cttttcaggg cgagttattt cttaaatgaa aaagcacaag cccttatgtg 1000
 tcgaaataca cgctgttaca ctgaaaatat atgcacgaca gagcaagaag 1050
 cttgtgcatg atcacttctt atccgtcccc tcccagcac tccctcctct 1100
 tccattctc tccacatgtc tcaagcacc taccgagtag ggcaggccaa 1150
 atgttccttg ggagtaatgc caactccga cgttgccttc aggtccaaag 1200
 ggcttggaac cagctcgtga ggaagttctg aatctggcac taatattctt 1250
 gagtggataa tagtgtatca tagaatagga cggaaattgt attgagatgt 1300
 gacctgtgt cgctgtgga aaggcatagt gagaagaact tcccacgaa 1350
 agcccccttc atcgttggtc agtggtcggc tgtgtggatc ccaggagaga 1400
 catatgccac agactgtgag agcaaagccc gccgctgtga tctggacttg 1450
 atgcactgtg actgagaatg atttccaaat gtgaatatgt gtagggacgt 1500
 ggtctatcag gcctggaaca agatgggggc agtgaaggta tggtttagtg 1550
 tttgctttca tagtatgcca tgtacaatgt tttatatttc atagtttctt 1600

ttaagtaact accatgagtc tctctaagcc tcatggacaa agatgtagac 1650
 caaatgcaag agctgagctt gctttgggtt caaccatgat caaagaaaaa 1700
 ctgaggtcac ctgcaggctt acgtgggaag ctaagacaat atc 1743

<210> 17

<211> 1939

<212> DNA

<213> Homo sapiens

<400> 17

ctgcctccac tgctctgtgc tgggatcatg gaacttgac tgctgtgtgg 50
 gctggtggtg atggctggtg tgattccaat ccagggcgagg atcctgaacc 100
 tgaacaagat ggtcaagcaa gtgactggga aaatgcccac cctctcctac 150
 tggccctacg gctgtcactg cggactaggt ggcagaggcc aacccaaaga 200
 tgccacggac tgggtgctgcc agacccatga ctgctgctat gaccaccta 250
 agaccagagg gtgcggcatc tacaaggact attacagata caacttttcc 300
 caggggaaca tccactgctc tgacaaggga agctggtgtg agcagcagct 350
 gtgtgcctgt gacaaggagg tggccttctg cctgaagcgc aacctggaca 400
 cctaccagaa gcgactgcgt ttctactggc ggccccactg ccgggggagc 450
 acccttgggt gctagaagcc cacaccctct accctgttcc tcagcatgga 500
 gctctggcat cccacactca gtatctaacc tgaaccagcc tggcttttca 550
 aacactccgg ggggaggtag tcccagcctc ccccggaacc ctctaccaat 600
 gccttctgac cttctgaagc tttccgaatc ctcccagttg aggcagtagc 650
 tgtgtcctct gaggggtggat gggaatcttg ggagaagccc aagcaaggga 700
 gccctcagag gtggtgtttg gaccaaagca tcgggggtggg ggaggggtct 750
 gccgctgtcc cccacctgct ggcccccttg tccttctca cccctccaa 800
 tatagtctcg gagctacaac tgcagcagcc actataaagg gcaatattga 850
 tctttctgtc catgtggctc tatcttttaa aacctcaagg ccctccactg 900
 tcctaagata aagcctctca taggcactgg ggaccctgca cagtctggcc 950
 atgtgacctt ctccccaggc aagctctgaa gtccctgcag gtggaggcca 1000
 tgctgtctt aaactcagtt gcatccctgg tgcccaaagc aacaccagaa 1050
 ccaagaagga gctccataaa tccttcttgg gtgaagccta gacaaagccg 1100
 ccaggctctg tggctccagg caccagagcc ttgagtactt tctcctgcct 1150

ccaggcattg gctcaggggtg aattacaagg ggctactgaa tggctattac 1200
 tttcatcacg actgatcccc acctcctcag ggtcaaaggg ctacttttctg 1250
 gaagtctccc cagggtgact ccttctccct gactgcaagg gctcactccc 1300
 tcctccaagc tcccacaatg cttcatggct ctgccgctta cctagcttgg 1350
 cctagagtgg caaatggaac ttctctgatc tcccccaact agactggagc 1400
 ccccggaagg tggagaccat gtctgtgccca tctctgtttc ccctgttttc 1450
 ccacatacta ggtgctcaat tcatgcctgt gaatggcgtg agcccataat 1500
 ggatacacag aggttgcagc agatgggtgtg ggtacctcac ccagatatct 1550
 tccaggccca agggccctct ccctgagtga ggccaggtgt tggcagccaa 1600
 ctgctccaat ctgccctcct cccctaaata ctgccctggc tagtggggag 1650
 ctgccttccc cctgccccac ctctcccacc aagaggccac ctgtcactca 1700
 tggccaggag agtgacacca tggaggggtac aattgccagc tccccctgtg 1750
 ctgtgcagca ttgtctgggt tgaatgacac tctcaaattg ttcttgggat 1800
 cgggctgagg ccaggcctct cctggaacca cctctctgct tggctctgacc 1850
 ccttggccta tccagttttc ctggttccct cacaggtttc tccagaaagt 1900
 actccctcag taaagcattt gcacaagaaa aaaaaaaaaa 1939

<210> 18
 <211> 5420
 <212> DNA
 <213> Homo sapiens

<220>
 <221> Unsure
 <222> 5094
 <223> Unknown base

<400> 18
 ggctgaaaga gcctgagctg tgcctctcca ttccactgct gtggcagggt 50
 cagaaatcct ggatagagaa aaccttttgc aaacgggaat gtatctttgt 100
 aattcctagc acgaaagact ctaacagggt ttgctgtggc cagttcacca 150
 accagcatat cccccctctg ccaagtgcaa caccagcaa aaatgaagag 200
 gaaagcaaac aggtgggagac tcagcctgag aaatggctct ttgccaagca 250
 caccagagc tacccaacag attcctatgg agttcttgaa ttccagggtg 300
 gcggatattc caataaagcc atgtatatcc gtgtatccta tgacaccaag 350
 ccagactcac tgctccatct catggtgaaa gattggcagc tggaaactccc 400

caagctctta atatctgtgc atggaggcct ccagaacttt gagatgcagc 450
 ccaagctgaa acaagtccttt gggaaaggcc tgatcaaggc tgctatgacc 500
 accggggcct ggatcttcac cgggggtgtc agcacagggtg ttatcagcca 550
 cgtaggggat gccttgaaag accactcctc caagtccaga ggccgggttt 600
 gtgctatagg aattgctcca tggggcatcg tggagaataa ggaagacctg 650
 gttggaaagg atgtacaag agtgtaccag accatgtcca accctctaag 700
 taagctctct gtgctcaaca actcccacac ccacttcac ctggctgaca 750
 atggcaccct gggcaagtat ggcgccgagg tgaagctgcg aaggctgctg 800
 gaaaagcaca tctccctcca gaagatcaac acaagactgg ggcagggcgt 850
 gccctcgtg ggtctcgtgg tggagggggg ccctaacgtg gtgtccatcg 900
 tcttgaata cctgcaagaa gagcctccca tcctgtggt gatttgtgat 950
 ggcagcggac gtgcctcggg catcctgtcc tttgcgcaca agtactgtga 1000
 agaaggcgga ataataaatg agtccctcag ggagcagctt ctagttacca 1050
 ttcagaaaac atttaattat aataaggcac aatcacatca gctgtttgca 1100
 attataatgg agtgcataa gaagaaagaa ctcgctactg tgttcagaat 1150
 gggttctgag ggccagcagg acatcgagat ggcaatttta actgccctgc 1200
 tgaaaggaac aaacgtatct gctccagatc agctgagctt ggcactggct 1250
 tggaaccgag tggacatagc acgaagccag atctttgtct ttggggccca 1300
 ctggacgccc ctgggaagcc tggcaccccc gacggacagc aaagccacgg 1350
 agaaggagaa gaagccaccc atggccacca ccaagggagg aagaggaaaa 1400
 gggaaaggca agaagaaagg gaaagtgaag gaggaagtgg aggaagaaac 1450
 tgacccccgg aagatagagc tgctgaactg ggtgaatgct ttggagcaag 1500
 cgatgctaga tgctttagtc ttagatcgtg tcgactttgt gaagctcctg 1550
 attgaaaacg gagtgaacat gcaacacttt ctgaccattc cgaggctgga 1600
 ggagctctat aacacaagac tgggtccacc aaacacactt catctgctgg 1650
 tgaggggatgt gaaaaagagc aaccttccgc ctgattacca catcagcctc 1700
 atagacatcg ggctcgtgct ggagtacctc atgggaggag cctaccgctg 1750
 caactacact cggaaaaact ttcggaccct ttacaacaac ttgtttggac 1800
 caaagaggcc taaagctctt aaacttctgg gaatggaaga tgatgagcct 1850

ccagctaaaag ggaagaaaaa aaaaaaaaaag aaaaaggagg aagagatcga 1900
cattgatgtg gacgaccctg ccgtgagtcg gttccagtat cccttccacg 1950
agctgatggt gtgggcagtg ctgatgaaac gccagaaaat ggagtggttc 2000
ctctggcagc gaggggaaga gagcatggcc aaggccctgg tggcctgcaa 2050
gctctacaag gccatggccc acgagtcctc cgagagtgat ctggtggatg 2100
acatctccca ggacttggat aacaattcca aagacttcgg ccagcttgct 2150
ttggagttat tagaccagtc ctataagcat gacgagcaga tcgctatgaa 2200
actcctgacc tacgagctga aaaactggag caactcgacc tgcctcaaac 2250
tggccgtggc agccaaacac cgggacttca ttgctcacac ctgcagccag 2300
atgctgctga ccgatatgtg gatgggaaga ctgcggatgc ggaagaaccc 2350
cggcctgaag gttatcatgg ggattcttct acccccacc atcttgtttt 2400
tggaatttcg cacatatgat gatttctcgt atcaaacatc caaggaaaac 2450
gaggatggca aagaaaaaga agaggaaaat acggatgcaa atgcagatgc 2500
tggctcaaga aagggggatg aggagaacga gcataaaaaa cagagaagta 2550
ttcccatcgg aacaaagatc tgtgaattct ataacgcgcc cattgtcaag 2600
ttctggtttt acacaatatc atacttgggc tacctgctgc tgtttaacta 2650
cgtcatcctg gtgcggatgg atggctggcc gtccctccag gagtggatcg 2700
tcatctccta catcgtgagc ctggcgtaga agaagatacg agagatcctc 2750
atgtcagaac caggcaaaact cagccagaaa atcaaagttt ggcttcagga 2800
gtactggaac atcacagatc tcgtggccat ttccacattc atgattggag 2850
caattcttcg cctacagaac cagccctaca tgggctatgg ccgggtgatc 2900
tactgtgtgg atatcatctt ctggtacatc cgtgtcctgg acatctttgg 2950
tgtcaacaag tatctggggc catacgtgat gatgattgga aagatgatga 3000
tcgacatgct gtactttgtg gtcacatgc tggctgtgct catgagtttc 3050
ggagtagccc gtcaagccat tctgcatcca gaggagaagc cctcttgga 3100
actggcccga aacatcttct acatgcccta ctggatgatc tatggagagg 3150
tgtttgaga ccagatagac ctctacgcca tggaaattaa tcctccttgt 3200
ggtgagaacc tatatgatga ggagggaag cggcttcctc cctgtatccc 3250
cggcgccctg ctactccag cactcatggc gtgctatcta ctggtcgcca 3300

acatcctgct ggtgaacctg ctgattgctg tgttcaacaa tactttcttt 3350
 gaagtaaaat caatatccaa ccagggtgtg aagttccagc gatatcagct 3400
 gattatgaca tttcatgaca ggccagtcct gccccaccg atgatcattt 3450
 taagccacat ctacatcatc attatgctc tcagcggccg ctgcaggaaa 3500
 aagagagaag gggaccaaga ggaacgggat cgtggattga agctcttcct 3550
 tagcgacgag gagctaaaga ggctgcatga gttcgaggag cagtgcgtgc 3600
 aggagcactt ccgggagaag gaggatgagc agcagtcgtc cagcgacgag 3650
 cgcacccggg tcacttctga aagagttgaa aatatgtcaa tgaggttgga 3700
 agaaatcaat gaaagagaaa cttttatgaa aacttcctg cagactgttg 3750
 accttcgact tgctcagcta gaagaattat ctaacagaat ggtgaatgct 3800
 cttgaaaatc ttgcgggaat cgacaggtct gacctgatcc aggcacggtc 3850
 ccgggcttct tctgaatgtg aggcaacgta tcttctccg caaagcagca 3900
 tcaatagcgc tgatggctac agcttgatc gatatcattt taacggagaa 3950
 gagttattat ttgaggatac atctctctcc acgtcaccag ggacaggagt 4000
 caggaaaaaa acctgttcct tccgtataaa ggaagagaag gacgtgaaaa 4050
 cgcacctagt ccagaaatgt cagaacagtc ttcaccttc actgggcaca 4100
 agcacatcag caaccccaga tggcagtcac cttgcagtag atgacttaaa 4150
 gaacgctgaa gagtcaaaat taggtccaga tattgggatt tcaaaggaag 4200
 atgatgaaag acagacagac tctaaaaaag aagaaactat ttccccaagt 4250
 ttaataaaaa cagatgtgat acatggacag gacaaatcag atgttcaaaa 4300
 cactcagcta acagtggaaa cgacaaatat agaaggcact atttcctatc 4350
 ccctggaaga aacccaaatt acacgctatt tccccgatga aacgatcaat 4400
 gcttgtaaaa caatgaagtc cagaagcttc gtctattccc gggaagaaa 4450
 gctggtcggg ggggttaacc aggatgtaga gtacagttca atcacggacc 4500
 agcaattgac gacggaatgg caatgccaaag ttcaaaagat cacgcgctct 4550
 catagcacag atattcctta cattgtgtcg gaagctgcag tgcaagctga 4600
 gcaaaaagag cagtttgagc atatgcaaga tgaacaccat gtcgctgaag 4650
 caattcctcg aatccctcgc ttgtccctaa ccattactga cagaaatggg 4700
 atggaaaact tactgtctgt gaagccagat caaactttgg gattcccatc 4750

tctcagggtca aaaagtttac atggacatcc taggaatgtg aaatccattc 4800
agggaaagt agacagatct ggacatgccca gtagtgtaag cagcttagta 4850
attgtgtctg gaatgacagc agaagaaaaa aagggttaaga aagagaaaagc 4900
ttccacagaa actgaatgct agtctgtttt gtttctttaa tttttttttt 4950
taacagtcag aaacccta atgggtgtca tcttggtcca tcctaaacac 5000
atmtccaatt tcctaaaaac attttccctt aaaaaatttt ggaaattcag 5050
acttgattta caatttaatg cactaaaagt agtattttgt tagnatatgt 5100
tagtaggctt agttttttca gttgcagtag tatcaaatga aagtgatgat 5150
actgtaacga agataaattg gctaatacgt atacaagatt atacaatctc 5200
tttattactg agggccacca aatagcctag gaagtgcctt cgagcactga 5250
agtcaccatt aggtcactca agaagtaagc aactagctgg gcacagtggc 5300
tcatgcctgt aatcctagca ctttgggagg ccaaggcaga aagatagctt 5350
gagtccagga gtttgagacc agcctgggca acatagtgat accccatctc 5400
ttaaaaaaaaa aaaaaaaaaa 5420

<210> 19
<211> 1664
<212> DNA
<213> Homo sapiens

<400> 19
ctgaatcttc gtttctctcc cagggaccct ccattttcca tatccaggaa 50
aatgtgatgc gccacaggta tcagcgtctg gatcgccact tcacgtttta 100
gccacaagt actcagtgga agatccagag tcaacagagg ctcgtcagga 150
agatgtctac agaaaaggta gacccaaaagg aggaagctgg ggaaaaagag 200
gtgtgctgg accagatcaa aggaccggac aaagaggagg aaccaccagc 250
tgctgcatcc catggccagg ggtggcgtcc aggtggcaga gcagctagga 300
acgcaaggcc tgaacctggg gccagacacc ctgctctccc ggccatggtc 350
aacgaccctc cagtacctgc cttactgtgg gccaggagg tgggccaagt 400
cttggcaggc cgtgcccga ggtgctgct gcagtttggg gtgctcttct 450
gcaccatcct ccttttgctc tgggtgtctg tcttctctta tggctccttc 500
tactattcct atatgccgac agtcagccac ctcagccctg tgcatttcta 550
ctacaggacc gactgtgatt cctccaccac ctcactctgc tccttcctg 600

ttgccaatgt ctcgctgact aaggggtggac gtgatcgggt gctgatgtat 650
 ggacagccgt atcgtgttac cttagagctt gagctgccag agtcccctgt 700
 gaatcaagat ttgggcatgt tcttggtcac catttcctgc tacaccagag 750
 gtggccgaat catctccact tcttcgcgtt cggatgatgct gcattaccgc 800
 tcagacctgc tccagatgct ggacacactg gtcttctcta gcctcctgct 850
 atttggtttt gcagagcaga agcagctgct ggaggtggaa ctctacgcag 900
 actatagaga gaactcgtac gtgccgacca ctggagcgat cattgagatc 950
 cacagcaagc gcatccagct gtatggagcc tacctccgca tccacgcgca 1000
 cttcactggg ctcagatacc tgctatacaa cttcccgatg acctgcgcct 1050
 tcataggtgt tgccagcaac ttcaccttcc tcagcgtcat cgtgctcttc 1100
 agctacatgc agtgggtgtg ggggggcatc tggccccgac accgcttctc 1150
 tttgcaggtt aacatccgaa aaagagacaa ttcccggaa gaagtccaac 1200
 gaaggatctc tgctcatcag ccagggcctg aaggccagga ggagtcaact 1250
 ccgcaatcag atgttacaga ggatggtag agccctgaag atccctcagg 1300
 gacagagggt cagctgtccg aggaggagaa accagatcag cagcccctga 1350
 gcggagaaga ggagctagag cctgaggcca gtgatggttc aggctcctgg 1400
 gaagatgcag ctttgctgac ggaggccaac ctgcctgctc ctgctcctgc 1450
 ttctgcttct gccctgtcc tagagactct gggcagctct gaacctgctg 1500
 ggggtgctct ccgacagcgc cccacctgct ctagttcctg aagaaaagg 1550
 gcagactcct cacattccag cactttccca cctgactcct ctcccctcgt 1600
 ttttccttca ataaactatt ttgtgtcagc ttcaaaaaaa aaaaaaaaaa 1650
 aaaaaaaaaa aaaa 1664

<210> 20
 <211> 4719
 <212> DNA
 <213> Homo sapiens

<400> 20
 aaccggctgc ggggatgggg ccaccgctcc cgctgctgct gctgctactg 50
 ctgctgctgc cgccacgcgt cctgcctgcc gcccttcgt ccgtcccccg 100
 cggccggcag ctcccggggc gtctgggctg cctgctcgag gagggcctct 150
 gcggagcgtc cgaggcctgt gtgaacgatg gagtgtttg aagggtgccag 200

aagggtccgg caatggactt ttaccgctac gaggtgtcgc ccgtggccct 250
gcagcgcctg cgcggtggcgt tgcagaagct ttccggcaca ggtttcacgt 300
ggcaggatga ctatactcag tatgtgatgg accaggaact tgcagacctc 350
ccgaaaacct acctgaggcg tcctgaagca tccagcccag ccaggccctc 400
aaaacacagc gttggcagcg agaggaggta cagtcgggag ggcggtgctg 450
ccctggccaa cgccctccga cgccacctgc ccttcttgga ggccctgtcc 500
caggccccag cctcagacgt gctcgccagg acccatacgg cgcaggacag 550
accccccgct gagggtgatg accgcttctc cgagagcatc ctgacctatg 600
tggcccacac gtctgcgtg acgtaccctc ccgggccccg gaccagctc 650
cgggaggacc tcctgccgcg gaccctcggc cagctccagc cagatgagct 700
cagccctaag gtggacagtg gtgtggacag acaccatctg atggcgggcc 750
tcagtgccta tgctgccag aggccccag ctccccccgg ggagggcagc 800
ctggagccac agtaccttct gcgtgcaccc tcaagaatgc ccaggccttt 850
gctggcacca gccgcccccc agaagtggcc ttacactctg ggagattccg 900
aagaccctc cagcacaggc gatggagcac ggattcatac cctcctgaag 950
gacctgcaga ggcagccggc tgaggtgagg ggcctgagtg gcctggagct 1000
ggacggcatg gctgagctga tggctggcct gatgcaaggc gtggacctatg 1050
gagtagctcg aggcagccct gggagagcgg ccctgggaga gtctggagaa 1100
caggcggatg gcccgaaggc caccctccgt ggagacagct ttccagatga 1150
cggagtgcag gacgacgatg atagacttta ccaagaggtc caccgtctga 1200
gtgccacact cgggggcctc ctgcaggacc acgggtctcg actcttacct 1250
ggagccctcc cctttgcaag gccctcgcac atggagagga agaagtccga 1300
gcaccctgag tcttccctgt cttcagaaga ggagactgcc ggagtggaga 1350
acgtcaagag ccagacgtat tccaaagatc tgctggggca gcagccgcat 1400
tcggagcccc gggccgctgc gtttggggag ctccaaaacc agatgcctgg 1450
gccctcgaag gaggagcaga gccttcagc ggggtgctcag gaggccctca 1500
gcgacggcct gcaattggag gtccagcctt ccgaggaaga ggcgcggggc 1550
tacatcgtga cagacagaga cccctgcgc cccgaggaag gaaggcggct 1600
ggtggaggac gtcgccccgc tcctgcaggt gccagcagt gcgttcgctg 1650

acgtggaggt tctcggacca gcagtgcct tcaaagtgag cgccaatgtc 1700
 caaaacgtga ccactgagga tgtggagaag gccacagttg acaacaaaga 1750
 caaactggag gaaacctctg gactgaaaat tcttcaaacc ggagtcgggt 1800
 cgaaaagcaa actcaagttc ctgcctcctc aggcggagca agaagactcc 1850
 accaagttca tcgcgtcac cctggtctcc ctgcctgca tcctgggcgt 1900
 cctcctggcc tctggcctca tctactgcct ccgccatagc tctcagcaca 1950
 ggctgaagga gaagctctcg ggactagggg gcgaccagg tgcatatgcc 2000
 actgccgcct accaggagct gtgccgccag cgtatggcca cgcgccacc 2050
 agaccgacct gagggccgc acacgtcacg catcagcagc gtctcatccc 2100
 agttcagcga cgggccgatc ccagccct cgcacgcag cagcgctca 2150
 tcctggtccg aggagcctgt gcagtccaac atggacatct ccaccggcca 2200
 catgatcctg tcctacatgg aggaccacct gaagaacaag aaccggctgg 2250
 agaaggagtg ggaagcgtg tgcgcctacc aggcggagcc caacagctcg 2300
 ttctggggcc agagggagga gaacgtgccc aagaaccgct ccctggctgt 2350
 gctgacctat gaccactccc gggctctgct gaaggcggag aacagccaca 2400
 gccactcaga ctacatcaac gctagcccca tcatggatca cgaccgagg 2450
 aacccgcgt acatgccac ccagggaccg ctgccgccca ccgtggctga 2500
 cttttggcag atggtgtggg agagcggctg cgtggtgatc gtcattgctga 2550
 caccctcgc ggagaacggc gtccggcagt gctaccacta ctggccggat 2600
 gaaggctcca atctctacca catctatgag gtgaacctgg tctccgagca 2650
 catctggtgt gaggacttcc tggtagggag cttctatctg aagaacctgc 2700
 agaccaacga gacgcgcacc gtgacgcagt tccacttcct gagttggtat 2750
 gaccgaggag tcccttcctc ctcaaggtcc ctctggact tccgcagaaa 2800
 agtaaacaaa tgctacaggg gccgttcttg tccgataatt gttcattgca 2850
 gtgacggtgc aggccggagc ggcacctacg tcctgatcga catggttctc 2900
 aacaagatgg ccaaaggtgc taaagagatt gatatcgag cgacctgga 2950
 gcacttgagg gaccagagac ccggcatggt ccagacgaag gagcagtttg 3000
 agttcgcgct gacagccgtg gctgaggagg tgaacgccat cctcaaggcc 3050
 cttccccagt gagcggcagc gtcaggggcc tcaggggagc cccacccca 3100

cggatgttgt caggaatcat gatctgactt taattgtgtg tcttctatta 3150
 taactgcata gtaatagggc ccttagctct cccgtagtca gcgcagttta 3200
 gcagttaaaa gtgtatTTTT gttaaataca acaataataa agagagattt 3250
 gtggaaaaat ccagttacgg gtggagggga atcgggtcat caattttcac 3300
 ttgcttaaaa aaaatacttt ttcttaaagc acccggtcac cttcttggtt 3350
 gaagtgtgtg taacaatgca gtagccagca cgttcgaggc ggtttccagg 3400
 aagagtgtgc ttgtcatctg ccactttcgg gaggggtggat ccactgtgca 3450
 ggagtggccg gggaaagctgg cagcactcag tgaggccgcc cggcacacaa 3500
 ggcacgtttg gcattttctt ttgagagagt ttatcattgg gagaagccgc 3550
 ggggacagaa ctgaacgtcc tgcagcttcg gggcaagtga gacaatcaca 3600
 gctcctcgct gcgtctccat caacactgcy cggggtacca tggacggccc 3650
 cgtcagccac accggtcagc ccaagcagag tgattcaggg gctccccggg 3700
 ggcagacacc tgtgcacccc atgagtagtg cccacttgag gctggcactc 3750
 ccttgacctc acctttgcaa agttacagat gcacccaac attgagatgt 3800
 gtttttaatg ttaaaatatt gatttctacg ttatgaaaac agatgcccc 3850
 gtgaatgctt acctgtgaga taaccacaac caggaagaac aaatctgggc 3900
 attgagcaag ctatgagggc ccccgggagc acacgaacc tgccaggccc 3950
 ccgctggctc ctccaggcac gtcccgacc tgtggggccc cagagagggg 4000
 acatttcctt cctgggagag aaggagatca gggcaactcg gagagggctg 4050
 cgagcatttc cctccccgga gaggaatca gggcgacctg cacgcactgc 4100
 gtagagcctg gaagggaagt gagaaaccag ccgaccggcc ctgcccctt 4150
 tccccggatc acttaatgaa ccacgtgttt tgacatcatg ttaacctaag 4200
 cacgtacaga tgattccgga tttgacaaaa taacatttga gtatccgatt 4250
 cgccatcacc cctacccccg aaataggaca actcatttca ttgaccagga 4300
 tgatcacatg gaaggcggcg cagaggcagc tgtgtgggct gcagatttcc 4350
 tgtgtggggt tcagcgata aaacgcacct ccattccgcc cttccacag 4400
 cattctcca tcttagatag atggtactct ccaaaggccc taccagaggg 4450
 aacacggcct actgagcggg cagaatgatg ccaaaatatt gcttatgtct 4500
 ctacatggta ttgtaatgaa tatctgcttt aatatagcta tcatttcttt 4550

tccaaaatta cttctcttta tctggaattt aattaatcga aatgaattta 4600
tctgaatata ggaagcatat gcctacttgt aatttctaac tacttatgtt 4650
tgaagagaaa cctccggtgt gagatataca aatatattta atttgtgtcat 4700
attaaacttc ccggaattc 4719

<210> 21
<211> 1453
<212> DNA
<213> Homo sapiens

<400> 21
gcatctggtt tgtcagatcc gagaggctct gaaactgcgg agcggccacc 50
ggacgccttc tggagcaggt agcagcatgc agccgcctcc aagtctgtgc 100
ggacgcgccc tggttgcgct ggttcttgcc tgcggcctgt cgcggatctg 150
gggagaggag agaggcttcc cgctgacag ggccactccg cttttgcaa 200
ccgcagagat aatgacgcca cccactaaga cttatggcc caagggttcc 250
aacgccagtc tggcgcggtc gttggcacct gcggagggtc ctaaaggaga 300
caggacggca ggatctccgc cacgcaccat ctcccctccc ccgtgccaag 350
gacctatcga gatcaaggag actttcaa atcatcaacac ggttgtgtcc 400
tgccttgtgt tcgtgctggg gatcatcggg aactccacac ttctgagaat 450
tatctacaag aacaagtgca tgcgaaacgg tccaatatac ttgatcgcca 500
gcttggtctt gggagacctg ctgcacatcg tcattgacat ccctatcaat 550
gtctacaagc tgctggcaga ggactggcca tttggagctg agatgtgtaa 600
gctggtgcct ttcatacaga aagcctccgt gggaaatcact gtgctgagtc 650
tatgtgctct gagtattgac agatatcgag ctggttgctt ttggagtaga 700
attaaaggaa ttgggggttcc aaaatggaca gcagtagaaa ttgttttgat 750
ttgggtggtc tctgtggttc tggctgtccc tgaagccata ggttttgata 800
taattacgat ggactacaaa ggaagttatc tgcgaatctg cttgcttcat 850
cccgttcaga agacagcttt catgcagttt tacaagacag caaaagattg 900
gtggctgttc agtttctatt tctgcttgcc attggccatc actgcatttt 950
tttatacact aatgacctgt gaaatgttga gaaagaaaag tggcatgcag 1000
attgctttaa atgatcacct aaagcagaga cgggaagtgg ccaaaccgt 1050
cttttgctg gtccttgtct ttgccctctg ctggcttccc cttcacctca 1100

gcaggattct gaagctcact ctttataatc agaatgatcc caatagatgt 1150
gaacttttga gctttctggtt ggtattggac tatattggta tcaacatggc 1200
ttcactgaat tcttgcatta acccaattgc tctgtatttg gtgagcaaaa 1250
gattcaaaaa ctgctttaag tcatgcttat gctgctggtg ccagtcattt 1300
gaagaaaaac agtccttgga ggaaaagcag tctgtgcttaa agttcaaagc 1350
taatgatcac ggatatgaca acttccgttc cagtaataaa tacagctcat 1400
cttgaagaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1450
aaa 1453

<210> 22

<211> 796

<212> PRT

<213> Homo sapiens

<400> 22

Met	Lys	Glu	Asn	Tyr	Cys	Leu	Gln	Ala	Ala	Leu	Val	Cys	Leu	Gly	1	5	10	15
Met	Leu	Cys	His	Ser	His	Ala	Phe	Ala	Pro	Glu	Arg	Arg	Gly	His	20	25	30	
Leu	Arg	Pro	Ser	Phe	His	Gly	His	His	Glu	Lys	Gly	Lys	Glu	Gly	35	40	45	
Gln	Val	Leu	Gln	Arg	Ser	Lys	Arg	Gly	Trp	Val	Trp	Asn	Gln	Phe	50	55	60	
Phe	Val	Ile	Glu	Glu	Tyr	Thr	Gly	Pro	Asp	Pro	Val	Leu	Val	Gly	65	70	75	
Arg	Leu	His	Ser	Asp	Ile	Asp	Ser	Gly	Asp	Gly	Asn	Ile	Lys	Tyr	80	85	90	
Ile	Leu	Ser	Gly	Glu	Gly	Ala	Gly	Thr	Ile	Phe	Val	Ile	Asp	Asp	95	100	105	
Lys	Ser	Gly	Asn	Ile	His	Ala	Thr	Lys	Thr	Leu	Asp	Arg	Glu	Glu	110	115	120	
Arg	Ala	Gln	Tyr	Thr	Leu	Met	Ala	Gln	Ala	Val	Asp	Arg	Asp	Thr	125	130	135	
Asn	Arg	Pro	Leu	Glu	Pro	Pro	Ser	Glu	Phe	Ile	Val	Lys	Val	Gln	140	145	150	
Asp	Ile	Asn	Asp	Asn	Pro	Pro	Glu	Phe	Leu	His	Glu	Thr	Tyr	His	155	160	165	
Ala	Asn	Val	Pro	Glu	Arg	Ser	Asn	Val	Gly	Thr	Ser	Val	Ile	Gln	170	175	180	

Val	Thr	Ala	Ser	Asp	Ala	Asp	Asp	Pro	Thr	Tyr	Gly	Asn	Ser	Ala		185	190	195
Lys	Leu	Val	Tyr	Ser	Ile	Leu	Glu	Gly	Gln	Pro	Tyr	Phe	Ser	Val		200	205	210
Glu	Ala	Gln	Thr	Gly	Ile	Ile	Arg	Thr	Ala	Leu	Pro	Asn	Met	Asp		215	220	225
Arg	Glu	Ala	Lys	Glu	Glu	Tyr	His	Val	Val	Ile	Gln	Ala	Lys	Asp		230	235	240
Met	Gly	Gly	His	Met	Gly	Gly	Leu	Ser	Gly	Thr	Thr	Lys	Val	Thr		245	250	255
Ile	Thr	Leu	Thr	Asp	Val	Asn	Asp	Asn	Pro	Pro	Lys	Phe	Pro	Gln		260	265	270
Arg	Leu	Tyr	Gln	Met	Ser	Val	Ser	Glu	Ala	Ala	Val	Pro	Gly	Glu		275	280	285
Glu	Val	Gly	Arg	Val	Lys	Ala	Lys	Asp	Pro	Asp	Ile	Gly	Glu	Asn		290	295	300
Gly	Leu	Val	Thr	Tyr	Asn	Ile	Val	Asp	Gly	Asp	Gly	Met	Glu	Ser		305	310	315
Phe	Glu	Ile	Thr	Thr	Asp	Tyr	Glu	Thr	Gln	Glu	Gly	Val	Ile	Lys		320	325	330
Leu	Lys	Lys	Pro	Val	Asp	Phe	Glu	Thr	Glu	Arg	Ala	Tyr	Ser	Leu		335	340	345
Lys	Val	Glu	Ala	Ala	Asn	Val	His	Ile	Asp	Pro	Lys	Phe	Ile	Ser		350	355	360
Asn	Gly	Pro	Phe	Lys	Asp	Thr	Val	Thr	Val	Lys	Ile	Ser	Val	Glu		365	370	375
Asp	Ala	Asp	Glu	Pro	Pro	Met	Phe	Leu	Ala	Pro	Ser	Tyr	Ile	His		380	385	390
Glu	Val	Gln	Glu	Asn	Ala	Ala	Ala	Gly	Thr	Val	Val	Gly	Arg	Val		395	400	405
His	Ala	Lys	Asp	Pro	Asp	Ala	Ala	Asn	Ser	Pro	Ile	Arg	Tyr	Ser		410	415	420
Ile	Asp	Arg	His	Thr	Asp	Leu	Asp	Arg	Phe	Phe	Thr	Ile	Asn	Pro		425	430	435
Glu	Asp	Gly	Phe	Ile	Lys	Thr	Thr	Lys	Pro	Leu	Asp	Arg	Glu	Glu		440	445	450
Thr	Ala	Trp	Leu	Asn	Ile	Thr	Val	Phe	Ala	Ala	Glu	Ile	His	Asn		455	460	465
Arg	His	Gln	Glu	Ala	Gln	Val	Pro	Val	Ala	Ile	Arg	Val	Leu	Asp				

470										475					480				
Val	Asn	Asp	Asn	Ala	Pro	Lys	Phe	Ala	Ala	Pro	Tyr	Glu	Gly	Phe					
				485					490					495					
Ile	Cys	Glu	Ser	Asp	Gln	Thr	Lys	Pro	Leu	Ser	Asn	Gln	Pro	Ile					
				500					505					510					
Val	Thr	Ile	Ser	Ala	Asp	Asp	Lys	Asp	Asp	Thr	Ala	Asn	Gly	Pro					
				515					520					525					
Arg	Phe	Ile	Phe	Ser	Leu	Pro	Pro	Glu	Ile	Ile	His	Asn	Pro	Asn					
				530					535					540					
Phe	Thr	Val	Arg	Asp	Asn	Arg	Asp	Asn	Thr	Ala	Gly	Val	Tyr	Ala					
				545					550					555					
Arg	Arg	Gly	Gly	Phe	Ser	Arg	Gln	Lys	Gln	Asp	Leu	Tyr	Leu	Leu					
				560					565					570					
Pro	Ile	Val	Ile	Ser	Asp	Gly	Gly	Ile	Pro	Pro	Met	Ser	Ser	Thr					
				575					580					585					
Asn	Thr	Leu	Thr	Ile	Lys	Val	Cys	Gly	Cys	Asp	Val	Asn	Gly	Ala					
				590					595					600					
Leu	Leu	Ser	Cys	Asn	Ala	Glu	Ala	Tyr	Ile	Leu	Asn	Ala	Gly	Leu					
				605					610					615					
Ser	Thr	Gly	Ala	Leu	Ile	Ala	Ile	Leu	Ala	Cys	Ile	Val	Ile	Leu					
				620					625					630					
Leu	Val	Ile	Val	Val	Leu	Phe	Val	Thr	Leu	Arg	Arg	Gln	Lys	Lys					
				635					640					645					
Glu	Pro	Leu	Ile	Val	Phe	Glu	Glu	Glu	Asp	Val	Arg	Glu	Asn	Ile					
				650					655					660					
Ile	Thr	Tyr	Asp	Asp	Glu	Gly	Gly	Gly	Glu	Glu	Asp	Thr	Glu	Ala					
				665					670					675					
Phe	Asp	Ile	Ala	Thr	Leu	Gln	Asn	Pro	Asp	Gly	Ile	Asn	Gly	Phe					
				680					685					690					
Ile	Pro	Arg	Lys	Asp	Ile	Lys	Pro	Glu	Tyr	Gln	Tyr	Met	Pro	Arg					
				695					700					705					
Pro	Gly	Leu	Arg	Pro	Ala	Pro	Asn	Ser	Val	Asp	Val	Asp	Asp	Phe					
				710					715					720					
Ile	Asn	Thr	Arg	Ile	Gln	Glu	Ala	Asp	Asn	Asp	Pro	Thr	Ala	Pro					
				725					730					735					
Pro	Tyr	Asp	Ser	Ile	Gln	Ile	Tyr	Gly	Tyr	Glu	Gly	Arg	Gly	Ser					
				740					745					750					
Val	Ala	Gly	Ser	Leu	Ser	Ser	Leu	Glu	Ser	Ala	Thr	Thr	Asp	Ser					
				755					760					765					

Asp Leu Asp Tyr Asp Tyr Leu Gln Asn Trp Gly Pro Arg Phe Lys
770 775 780

Lys Leu Ala Asp Leu Tyr Gly Ser Lys Asp Thr Phe Asp Asp Asp
785 790 795

Ser

<210> 23

<211> 215

<212> PRT

<213> Homo sapiens

<400> 23

Met Tyr Gly Lys Ser Ser Thr Arg Ala Val Leu Leu Leu Leu Gly
1 5 10 15

Ile Gln Leu Thr Ala Leu Trp Pro Ile Ala Ala Val Glu Ile Tyr
20 25 30

Thr Ser Arg Val Leu Glu Ala Val Asn Gly Thr Asp Ala Arg Leu
35 40 45

Lys Cys Thr Phe Ser Ser Phe Ala Pro Val Gly Asp Ala Leu Thr
50 55 60

Val Thr Trp Asn Phe Arg Pro Leu Asp Gly Gly Pro Glu Gln Phe
65 70 75

Val Phe Tyr Tyr His Ile Asp Pro Phe Gln Pro Met Ser Gly Arg
80 85 90

Phe Lys Asp Arg Val Ser Trp Asp Gly Asn Pro Glu Arg Tyr Asp
95 100 105

Ala Ser Ile Leu Leu Trp Lys Leu Gln Phe Asp Asp Asn Gly Thr
110 115 120

Tyr Thr Cys Gln Val Lys Asn Pro Pro Asp Val Asp Gly Val Ile
125 130 135

Gly Glu Ile Arg Leu Ser Val Val His Thr Val Arg Phe Ser Glu
140 145 150

Ile His Phe Leu Ala Leu Ala Ile Gly Ser Ala Cys Ala Leu Met
155 160 165

Ile Ile Ile Val Ile Val Val Val Leu Phe Gln His Tyr Arg Lys
170 175 180

Lys Arg Trp Ala Glu Arg Ala His Lys Val Val Glu Ile Lys Ser
185 190 195

Lys Glu Glu Glu Arg Leu Asn Gln Glu Lys Lys Val Ser Val Tyr
200 205 210

Leu Glu Asp Thr Asp

<210> 24
 <211> 796
 <212> PRT
 <213> Homo sapiens

<400> 24

Met	Lys	Glu	Asn	Tyr	Cys	Leu	Gln	Ala	Ala	Leu	Val	Cys	Leu	Gly	1	5	10	15
Met	Leu	Cys	His	Ser	His	Ala	Phe	Ala	Pro	Glu	Arg	Arg	Gly	His	20	25	30	
Leu	Arg	Pro	Ser	Phe	His	Gly	His	His	Glu	Lys	Gly	Lys	Glu	Gly	35	40	45	
Gln	Val	Leu	Gln	Arg	Ser	Lys	Arg	Gly	Trp	Val	Trp	Asn	Gln	Phe	50	55	60	
Phe	Val	Ile	Glu	Glu	Tyr	Thr	Gly	Pro	Asp	Pro	Val	Leu	Val	Gly	65	70	75	
Arg	Leu	His	Ser	Asp	Ile	Asp	Ser	Gly	Asp	Gly	Asn	Ile	Lys	Tyr	80	85	90	
Ile	Leu	Ser	Gly	Glu	Gly	Ala	Gly	Thr	Ile	Phe	Val	Ile	Asp	Asp	95	100	105	
Lys	Ser	Gly	Asn	Ile	His	Ala	Thr	Lys	Thr	Leu	Asp	Arg	Glu	Glu	110	115	120	
Arg	Ala	Gln	Tyr	Thr	Leu	Met	Ala	Gln	Ala	Val	Asp	Arg	Asp	Thr	125	130	135	
Asn	Arg	Pro	Leu	Glu	Pro	Pro	Ser	Glu	Phe	Ile	Val	Lys	Val	Gln	140	145	150	
Asp	Ile	Asn	Asp	Asn	Pro	Pro	Glu	Phe	Leu	His	Glu	Thr	Tyr	His	155	160	165	
Ala	Asn	Val	Pro	Glu	Arg	Ser	Asn	Val	Gly	Thr	Ser	Val	Ile	Gln	170	175	180	
Val	Thr	Ala	Ser	Asp	Ala	Asp	Asp	Pro	Thr	Tyr	Gly	Asn	Ser	Ala	185	190	195	
Lys	Leu	Val	Tyr	Ser	Ile	Leu	Glu	Gly	Gln	Pro	Tyr	Phe	Ser	Val	200	205	210	
Glu	Ala	Gln	Thr	Gly	Ile	Ile	Arg	Thr	Ala	Leu	Pro	Asn	Met	Asp	215	220	225	
Arg	Glu	Ala	Lys	Glu	Glu	Tyr	His	Val	Val	Ile	Gln	Ala	Lys	Asp	230	235	240	
Met	Gly	Gly	His	Met	Gly	Gly	Leu	Ser	Gly	Thr	Thr	Lys	Val	Thr	245	250	255	

Ile	Thr	Leu	Thr	Asp	Val	Asn	Asp	Asn	Pro	Pro	Lys	Phe	Pro	Gln	260	265	270
Arg	Leu	Tyr	Gln	Met	Ser	Val	Ser	Glu	Ala	Ala	Val	Pro	Gly	Glu	275	280	285
Glu	Val	Gly	Arg	Val	Lys	Ala	Lys	Asp	Pro	Asp	Ile	Gly	Glu	Asn	290	295	300
Gly	Leu	Val	Thr	Tyr	Asn	Ile	Val	Asp	Gly	Asp	Gly	Met	Glu	Ser	305	310	315
Phe	Glu	Ile	Thr	Thr	Asp	Tyr	Glu	Thr	Gln	Glu	Gly	Val	Ile	Lys	320	325	330
Leu	Lys	Lys	Pro	Val	Asp	Phe	Glu	Thr	Glu	Arg	Ala	Tyr	Ser	Leu	335	340	345
Lys	Val	Glu	Ala	Ala	Asn	Val	His	Ile	Asp	Pro	Lys	Phe	Ile	Ser	350	355	360
Asn	Gly	Pro	Phe	Lys	Asp	Thr	Val	Thr	Val	Lys	Ile	Ser	Val	Glu	365	370	375
Asp	Ala	Asp	Glu	Pro	Pro	Met	Phe	Leu	Ala	Pro	Ser	Tyr	Ile	His	380	385	390
Glu	Val	Gln	Glu	Asn	Ala	Ala	Ala	Gly	Thr	Val	Val	Gly	Arg	Val	395	400	405
His	Ala	Lys	Asp	Pro	Asp	Ala	Ala	Asn	Ser	Pro	Ile	Arg	Tyr	Ser	410	415	420
Ile	Asp	Arg	His	Thr	Asp	Leu	Asp	Arg	Phe	Phe	Thr	Ile	Asn	Pro	425	430	435
Glu	Asp	Gly	Phe	Ile	Lys	Thr	Thr	Lys	Pro	Leu	Asp	Arg	Glu	Glu	440	445	450
Thr	Ala	Trp	Leu	Asn	Ile	Thr	Val	Phe	Ala	Ala	Glu	Ile	His	Asn	455	460	465
Arg	His	Gln	Glu	Ala	Gln	Val	Pro	Val	Ala	Ile	Arg	Val	Leu	Asp	470	475	480
Val	Asn	Asp	Asn	Ala	Pro	Lys	Phe	Ala	Ala	Pro	Tyr	Glu	Gly	Phe	485	490	495
Ile	Cys	Glu	Ser	Asp	Gln	Thr	Lys	Pro	Leu	Ser	Asn	Gln	Pro	Ile	500	505	510
Val	Thr	Ile	Ser	Ala	Asp	Asp	Lys	Asp	Asp	Thr	Ala	Asn	Gly	Pro	515	520	525
Arg	Phe	Ile	Phe	Ser	Leu	Pro	Pro	Glu	Ile	Ile	His	Asn	Pro	Asn	530	535	540
Phe	Thr	Val	Arg	Asp	Asn	Arg	Asp	Asn	Thr	Ala	Gly	Val	Tyr	Ala			

				545						550					555
Arg	Arg	Gly	Gly	Phe	Ser	Arg	Gln	Lys	Gln	Asp	Leu	Tyr	Leu	Leu	
				560					565					570	
Pro	Ile	Val	Ile	Ser	Asp	Gly	Gly	Ile	Pro	Pro	Met	Ser	Ser	Thr	
				575					580					585	
Asn	Thr	Leu	Thr	Ile	Lys	Val	Cys	Gly	Cys	Asp	Val	Asn	Gly	Ala	
				590					595					600	
Leu	Leu	Ser	Cys	Asn	Ala	Glu	Ala	Tyr	Ile	Leu	Asn	Ala	Gly	Leu	
				605					610					615	
Ser	Thr	Gly	Ala	Leu	Ile	Ala	Ile	Leu	Ala	Cys	Ile	Val	Ile	Leu	
				620					625					630	
Leu	Val	Ile	Val	Val	Leu	Phe	Val	Thr	Leu	Arg	Arg	Gln	Lys	Lys	
				635					640					645	
Glu	Pro	Leu	Ile	Val	Phe	Glu	Glu	Glu	Asp	Val	Arg	Glu	Asn	Ile	
				650					655					660	
Ile	Thr	Tyr	Asp	Asp	Glu	Gly	Gly	Gly	Glu	Glu	Asp	Thr	Glu	Ala	
				665					670					675	
Phe	Asp	Ile	Ala	Thr	Leu	Gln	Asn	Pro	Asp	Gly	Ile	Asn	Gly	Phe	
				680					685					690	
Ile	Pro	Arg	Lys	Asp	Ile	Lys	Pro	Glu	Tyr	Gln	Tyr	Met	Pro	Arg	
				695					700					705	
Pro	Gly	Leu	Arg	Pro	Ala	Pro	Asn	Ser	Val	Asp	Val	Asp	Asp	Phe	
				710					715					720	
Ile	Asn	Thr	Arg	Ile	Gln	Glu	Ala	Asp	Asn	Asp	Pro	Thr	Ala	Pro	
				725					730					735	
Pro	Tyr	Asp	Ser	Ile	Gln	Ile	Tyr	Gly	Tyr	Glu	Gly	Arg	Gly	Ser	
				740					745					750	
Val	Ala	Gly	Ser	Leu	Ser	Ser	Leu	Glu	Ser	Ala	Thr	Thr	Asp	Ser	
				755					760					765	
Asp	Leu	Asp	Tyr	Asp	Tyr	Leu	Gln	Asn	Trp	Gly	Pro	Arg	Phe	Lys	
				770					775					780	
Lys	Leu	Ala	Asp	Leu	Tyr	Gly	Ser	Lys	Asp	Thr	Phe	Asp	Asp	Asp	
				785					790					795	

Ser

<210> 25
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 25

Met	Ala	Thr	Ala	Ala	Gly	Ala	Thr	Tyr	Phe	Gln	Arg	Gly	Ser	Leu
1				5					10					15
Phe	Trp	Phe	Thr	Val	Ile	Thr	Leu	Ser	Phe	Gly	Tyr	Tyr	Thr	Trp
				20					25					30
Val	Val	Phe	Trp	Pro	Gln	Ser	Ile	Pro	Tyr	Gln	Asn	Leu	Gly	Pro
				35					40					45
Leu	Gly	Pro	Phe	Thr	Gln	Tyr	Leu	Val	Asp	His	His	His	Thr	Leu
				50					55					60
Leu	Cys	Asn	Gly	Tyr	Trp	Leu	Ala	Trp	Leu	Ile	His	Val	Gly	Glu
				65					70					75
Ser	Leu	Tyr	Ala	Ile	Ala	Leu	Cys	Lys	His	Lys	Gly	Ile	Thr	Ser
				80					85					90
Gly	Arg	Ala	Gln	Leu	Leu	Trp	Phe	Leu	Gln	Thr	Phe	Phe	Phe	Gly
				95					100					105
Ile	Ala	Ser	Leu	Thr	Ile	Leu	Ile	Ala	Tyr	Lys	Arg	Lys	Arg	Gln
				110					115					120

Lys Gln Thr

<210> 26

<211> 257

<212> PRT

<213> Homo sapiens

<400> 26

Met	Ala	Ser	Lys	Ile	Gly	Ser	Arg	Arg	Trp	Met	Leu	Gln	Leu	Ile
1				5					10					15
Met	Gln	Leu	Gly	Ser	Val	Leu	Leu	Thr	Arg	Cys	Pro	Phe	Trp	Gly
				20					25					30
Cys	Phe	Ser	Gln	Leu	Met	Leu	Tyr	Ala	Glu	Arg	Ala	Glu	Ala	Arg
				35					40					45
Arg	Lys	Pro	Asp	Ile	Pro	Val	Pro	Tyr	Leu	Tyr	Phe	Asp	Met	Gly
				50					55					60
Ala	Ala	Val	Leu	Cys	Ala	Ser	Phe	Met	Ser	Phe	Gly	Val	Lys	Arg
				65					70					75
Arg	Trp	Phe	Ala	Leu	Gly	Ala	Ala	Leu	Gln	Leu	Ala	Ile	Ser	Thr
				80					85					90
Tyr	Ala	Ala	Tyr	Ile	Gly	Gly	Tyr	Val	His	Tyr	Gly	Asp	Trp	Leu
				95					100					105
Lys	Val	Arg	Met	Tyr	Ser	Arg	Thr	Val	Ala	Ile	Ile	Gly	Gly	Phe
				110					115					120

Leu	Val	Leu	Ala	Ser	Gly	Ala	Gly	Glu	Leu	Tyr	Arg	Arg	Lys	Pro
				125					130					135
Arg	Ser	Arg	Ser	Leu	Gln	Ser	Thr	Gly	Gln	Val	Phe	Leu	Gly	Ile
				140					145					150
Tyr	Leu	Ile	Cys	Val	Ala	Tyr	Ser	Leu	Gln	His	Ser	Lys	Glu	Asp
				155					160					165
Arg	Leu	Ala	Tyr	Leu	Asn	His	Leu	Pro	Gly	Gly	Glu	Leu	Met	Ile
				170					175					180
Gln	Leu	Phe	Phe	Val	Leu	Tyr	Gly	Ile	Leu	Ala	Leu	Ala	Phe	Leu
				185					190					195
Ser	Gly	Tyr	Tyr	Val	Thr	Leu	Ala	Ala	Gln	Ile	Leu	Ala	Val	Leu
				200					205					210
Leu	Pro	Pro	Val	Met	Leu	Leu	Ile	Asp	Gly	Asn	Val	Ala	Tyr	Trp
				215					220					225
His	Asn	Thr	Arg	Arg	Val	Glu	Phe	Trp	Asn	Gln	Met	Lys	Leu	Leu
				230					235					240
Gly	Glu	Ser	Val	Gly	Ile	Phe	Gly	Thr	Ala	Val	Ile	Leu	Ala	Thr
				245					250					255

Asp Gly

<210> 27
 <211> 460
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Unsure
 <222> 381
 <223> Unknown amino acid

<400> 27

Gly	Arg	Gly	Ser	Pro	Leu	Ala	Leu	Leu	Ile	Arg	Met	Lys	Thr	Leu
1				5					10					15
Leu	Phe	Gly	Val	Trp	Ala	Leu	Leu	Ala	Leu	Ile	Leu	Cys	Pro	Gly
				20					25					30
Val	Pro	Glu	Glu	Leu	Phe	Glu	Val	Ser	Ile	Trp	Pro	Ser	Gln	Ala
				35					40					45
Leu	Val	Glu	Phe	Gly	Gln	Ser	Leu	Val	Cys	Asn	Cys	Ser	Thr	Thr
				50					55					60
Cys	Pro	Asp	Pro	Gly	Pro	Ser	Gly	Ile	Glu	Thr	Phe	Leu	Lys	Lys
				65					70					75
Thr	Gln	Val	Asp	Lys	Gly	Pro	Gln	Trp	Lys	Glu	Phe	Leu	Leu	Glu
				80					85					90

Asp	Val	Thr	Glu	Asn	Ser	Ile	Leu	Gln	Cys	Phe	Phe	Ser	Cys	Ala	95	100	105
Gly	Ile	Gln	Lys	Asp	Thr	Ser	Leu	Gly	Ile	Thr	Val	Tyr	Gln	Pro	110	115	120
Pro	Glu	Gln	Val	Ile	Leu	Glu	Leu	Gln	Pro	Ala	Trp	Val	Ala	Val	125	130	135
Asp	Glu	Ala	Phe	Thr	Val	Lys	Cys	His	Val	Pro	Ser	Val	Ala	Pro	140	145	150
Leu	Glu	Ser	Leu	Thr	Leu	Ala	Leu	Leu	Gln	Gly	Asn	Gln	Glu	Leu	155	160	165
His	Arg	Lys	Asn	Phe	Thr	Ser	Leu	Ala	Val	Ala	Ser	Gln	Arg	Ala	170	175	180
Glu	Val	Ile	Ile	Ser	Val	Arg	Ala	Gln	Lys	Glu	Asn	Asp	Arg	Cys	185	190	195
Asn	Ser	Ser	Cys	His	Ala	Glu	Leu	Asp	Leu	Ser	Leu	Gln	Gly	Gly	200	205	210
Arg	Leu	Phe	Gln	Gly	Ser	Ser	Pro	Ile	Arg	Ile	Val	Arg	Ile	Phe	215	220	225
Glu	Phe	Ser	Gln	Ser	Pro	His	Ile	Trp	Val	Ser	Ser	Leu	Leu	Glu	230	235	240
Ala	Gly	Met	Ala	Glu	Thr	Val	Ser	Cys	Glu	Val	Ala	Arg	Val	Phe	245	250	255
Pro	Ala	Lys	Glu	Val	Met	Phe	His	Met	Phe	Leu	Glu	Asp	Gln	Glu	260	265	270
Leu	Ser	Ser	Ser	Leu	Ser	Trp	Glu	Gly	Asp	Thr	Ala	Trp	Ala	Asn	275	280	285
Ala	Thr	Ile	Arg	Thr	Met	Glu	Ala	Gly	Asp	Gln	Glu	Leu	Ser	Cys	290	295	300
Phe	Ala	Ser	Leu	Gly	Ala	Met	Glu	Gln	Lys	Thr	Arg	Lys	Leu	Val	305	310	315
His	Ser	Tyr	Ser	Phe	Pro	Pro	Pro	Ile	Leu	Glu	Leu	Lys	Glu	Ser	320	325	330
Tyr	Pro	Leu	Ala	Gly	Thr	Asp	Ile	Asn	Val	Thr	Cys	Ser	Gly	His	335	340	345
Val	Leu	Thr	Ser	Pro	Ser	Pro	Thr	Leu	Arg	Leu	Gln	Gly	Ala	Pro	350	355	360
Asp	Leu	Pro	Ala	Gly	Glu	Pro	Ala	Trp	Leu	Leu	Leu	Thr	Ala	Arg	365	370	375
Glu	Glu	Asp	Asp	Gly	Xaa	Asn	Phe	Ser	Cys	Glu	Ala	Ser	Leu	Val			

	380		385		390
Val Gln Gly Gln Arg Leu Met Lys Thr Thr Val Ile Gln Leu His	395		400		405
Ile Leu Lys Pro Gln Leu Glu Glu Ser Ser Cys Pro Gly Lys Gln	410		415		420
Thr Trp Leu Glu Gly Met Glu His Thr Leu Ala Cys Val Pro Lys	425		430		435
Gly Asn Pro Ala Pro Ala Leu Val Cys Thr Trp Asn Gly Val Val	440		445		450
Phe Asp Leu Glu Val Pro Gln Lys Ala Thr	455		460		

<210> 28
 <211> 332
 <212> PRT
 <213> Homo sapiens

<400> 28
Met Leu Pro Arg Leu Leu Leu Leu Ile Cys Ala Pro Leu Cys Glu
1 5 10 15
Pro Ala Glu Leu Phe Leu Ile Ala Ser Pro Ser His Pro Thr Glu
20 25 30
Gly Ser Pro Val Thr Leu Thr Cys Lys Met Pro Phe Leu Gln Ser
35 40 45
Ser Asp Ala Gln Phe Gln Phe Cys Phe Phe Arg Asp Thr Arg Ala
50 55 60
Leu Gly Pro Gly Trp Ser Ser Ser Pro Lys Leu Gln Ile Ala Ala
65 70 75
Met Trp Lys Glu Asp Thr Gly Ser Tyr Trp Cys Glu Ala Gln Thr
80 85 90
Met Ala Ser Lys Val Leu Arg Ser Arg Arg Ser Gln Ile Asn Val
95 100 105
His Ile Pro Val Ser Arg Pro Ile Leu Met Leu Arg Ala Pro Arg
110 115 120
Ala Gln Ala Ala Val Glu Asp Val Leu Glu Leu His Cys Glu Ala
125 130 135
Leu Arg Gly Ser Pro Pro Ile Leu Tyr Trp Phe Tyr His Glu Asp
140 145 150
Ile Thr Leu Gly Ser Arg Ser Ala Pro Ser Gly Gly Gly Ala Ser
155 160 165
Phe Asn Leu Ser Leu Thr Glu Glu His Ser Gly Asn Tyr Ser Cys
170 175 180

Glu	Ala	Asn	Asn	Gly	Leu	Gly	Ala	Gln	Arg	Ser	Glu	Ala	Val	Thr	185	190	195
Leu	Asn	Phe	Thr	Val	Pro	Thr	Gly	Ala	Arg	Ser	Asn	His	Leu	Thr	200	205	210
Ser	Gly	Val	Ile	Glu	Gly	Leu	Leu	Ser	Thr	Leu	Gly	Pro	Ala	Thr	215	220	225
Val	Ala	Leu	Leu	Phe	Cys	Tyr	Gly	Leu	Lys	Arg	Lys	Ile	Gly	Arg	230	235	240
Arg	Ser	Ala	Arg	Asp	Pro	Leu	Arg	Ser	Leu	Pro	Ala	Leu	Pro	Gln	245	250	255
Glu	Phe	Thr	Tyr	Leu	Asn	Ser	Pro	Thr	Pro	Gly	Gln	Leu	Gln	Pro	260	265	270
Ile	Tyr	Glu	Asn	Val	Asn	Val	Val	Ser	Gly	Asp	Glu	Val	Tyr	Ser	275	280	285
Leu	Ala	Tyr	Tyr	Asn	Gln	Pro	Glu	Gln	Glu	Ser	Val	Ala	Ala	Glu	290	295	300
Thr	Leu	Gly	Thr	His	Met	Glu	Asp	Lys	Val	Ser	Leu	Asp	Ile	Tyr	305	310	315
Ser	Arg	Leu	Arg	Lys	Ala	Asn	Ile	Thr	Asp	Val	Asp	Tyr	Glu	Asp	320	325	330

Ala Met

<210> 29
 <211> 515
 <212> PRT
 <213> Homo sapiens

<400> 29

Met	Leu	Leu	Trp	Ala	Ser	Leu	Leu	Ala	Phe	Ala	Pro	Val	Cys	Gly	1	5	10	15
Gln	Ser	Ala	Ala	Ala	His	Lys	Pro	Val	Ile	Ser	Val	His	Pro	Pro	20	25	30	
Trp	Thr	Thr	Phe	Phe	Lys	Gly	Glu	Arg	Val	Thr	Leu	Thr	Cys	Asn	35	40	45	
Gly	Phe	Gln	Phe	Tyr	Ala	Thr	Glu	Lys	Thr	Thr	Trp	Tyr	His	Arg	50	55	60	
His	Tyr	Trp	Gly	Glu	Lys	Leu	Thr	Leu	Thr	Pro	Gly	Asn	Thr	Leu	65	70	75	
Glu	Val	Arg	Glu	Ser	Gly	Leu	Tyr	Arg	Cys	Gln	Ala	Arg	Gly	Ser	80	85	90	
Pro	Arg	Ser	Asn	Pro	Val	Arg	Leu	Leu	Phe	Ser	Ser	Asp	Ser	Leu				

	95		100		105									
Ile	Leu	Gln	Ala	Pro	Tyr	Ser	Val	Phe	Glu	Gly	Asp	Thr	Leu	Val
	110								115					120
Leu	Arg	Cys	His	Arg	Arg	Arg	Lys	Glu	Lys	Leu	Thr	Ala	Val	Lys
	125								130					135
Tyr	Thr	Trp	Asn	Gly	Asn	Ile	Leu	Ser	Ile	Ser	Asn	Lys	Ser	Trp
	140								145					150
Asp	Leu	Leu	Ile	Pro	Gln	Ala	Ser	Ser	Asn	Asn	Asn	Gly	Asn	Tyr
	155								160					165
Arg	Cys	Ile	Gly	Tyr	Gly	Asp	Glu	Asn	Asp	Val	Phe	Arg	Ser	Asn
	170								175					180
Phe	Lys	Ile	Ile	Lys	Ile	Gln	Glu	Leu	Phe	Pro	His	Pro	Glu	Leu
	185								190					195
Lys	Ala	Thr	Asp	Ser	Gln	Pro	Thr	Glu	Gly	Asn	Ser	Val	Asn	Leu
	200								205					210
Ser	Cys	Glu	Thr	Gln	Leu	Pro	Pro	Glu	Arg	Ser	Asp	Thr	Pro	Leu
	215								220					225
His	Phe	Asn	Phe	Phe	Arg	Asp	Gly	Glu	Val	Ile	Leu	Ser	Asp	Trp
	230								235					240
Ser	Thr	Tyr	Pro	Glu	Leu	Gln	Leu	Pro	Thr	Val	Trp	Arg	Glu	Asn
	245								250					255
Ser	Gly	Ser	Tyr	Trp	Cys	Gly	Ala	Glu	Thr	Val	Arg	Gly	Asn	Ile
	260								265					270
His	Lys	His	Ser	Pro	Ser	Leu	Gln	Ile	His	Val	Gln	Arg	Ile	Pro
	275								280					285
Val	Ser	Gly	Val	Leu	Leu	Glu	Thr	Gln	Pro	Ser	Gly	Gly	Gln	Ala
	290								295					300
Val	Glu	Gly	Glu	Met	Leu	Val	Leu	Val	Cys	Ser	Val	Ala	Glu	Gly
	305								310					315
Thr	Gly	Asp	Thr	Thr	Phe	Ser	Trp	His	Arg	Glu	Asp	Met	Gln	Glu
	320								325					330
Ser	Leu	Gly	Arg	Lys	Thr	Gln	Arg	Ser	Leu	Arg	Ala	Glu	Leu	Glu
	335								340					345
Leu	Pro	Ala	Ile	Arg	Gln	Ser	His	Ala	Gly	Gly	Tyr	Tyr	Cys	Thr
	350								355					360
Ala	Asp	Asn	Ser	Tyr	Gly	Pro	Val	Gln	Ser	Met	Val	Leu	Asn	Val
	365								370					375
Thr	Val	Arg	Glu	Thr	Pro	Gly	Asn	Arg	Asp	Gly	Leu	Val	Ala	Ala
	380								385					390

Gly	Ala	Thr	Gly	Gly	Leu	Leu	Ser	Ala	Leu	Leu	Leu	Ala	Val	Ala	
				395					400					405	
Leu	Leu	Phe	His	Cys	Trp	Arg	Arg	Arg	Lys	Ser	Gly	Val	Gly	Phe	
				410					415					420	
Leu	Gly	Asp	Glu	Thr	Arg	Leu	Pro	Pro	Ala	Pro	Gly	Pro	Gly	Glu	
				425					430					435	
Ser	Ser	His	Ser	Ile	Cys	Pro	Ala	Gln	Val	Glu	Leu	Gln	Ser	Leu	
				440					445					450	
Tyr	Val	Asp	Val	His	Pro	Lys	Lys	Gly	Asp	Leu	Val	Tyr	Ser	Glu	
				455					460					465	
Ile	Gln	Thr	Thr	Gln	Leu	Gly	Glu	Glu	Glu	Glu	Ala	Asn	Thr	Ser	
				470					475					480	
Arg	Thr	Leu	Leu	Glu	Asp	Lys	Asp	Val	Ser	Val	Val	Tyr	Ser	Glu	
				485					490					495	
Val	Lys	Thr	Gln	His	Pro	Asp	Asn	Ser	Ala	Gly	Lys	Ile	Ser	Ser	
				500					505					510	
Lys	Asp	Glu	Glu	Ser											
				515											

<210> 30
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 30

Met	Thr	Val	Ile	Arg	Phe	Phe	Pro	Ala	Ala	Ser	Ala	Thr	Lys	Arg	
1				5					10					15	
Val	Leu	Pro	Pro	Val	Leu	Arg	Val	Ser	Ser	Pro	Arg	Thr	Trp	Asn	
				20					25					30	
Pro	Asn	Val	Pro	Glu	Ser	Pro	Arg	Ile	Pro	Ala	Pro	Arg	Leu	Pro	
				35					40					45	
Lys	Arg	Met	Ser	Gly	Ala	Pro	Thr	Ala	Gly	Ala	Ala	Leu	Met	Leu	
				50					55					60	
Cys	Ala	Ala	Thr	Ala	Val	Leu	Leu	Ser	Ala	Gln	Gly	Gly	Pro	Val	
				65					70					75	
Gln	Ser	Lys	Ser	Pro	Arg	Phe	Ala	Ser	Trp	Asp	Glu	Met	Asn	Val	
				80					85					90	
Leu	Ala	His	Gly	Leu	Leu	Gln	Leu	Gly	Gln	Gly	Leu	Arg	Glu	His	
				95					100					105	
Ala	Glu	Arg	Thr	Arg	Ser	Gln	Leu	Ser	Ala	Leu	Glu	Arg	Arg	Leu	
				110					115					120	
Ser	Ala	Cys	Gly	Ser	Ala	Cys	Gln	Gly	Thr	Glu	Gly	Ser	Thr	Asp	

	125		130		135
Leu Pro Leu Ala	Pro Glu Ser Arg Val	Asp Pro Glu Val	Leu His		
	140	145	150		
Ser Leu Gln Thr	Gln Leu Lys Ala Gln	Asn Ser Arg Ile	Gln Gln		
	155	160	165		
Leu Phe His Lys	Val Ala Gln Gln Gln	Arg His Leu Glu	Lys Gln		
	170	175	180		
His Leu Arg Ile	Gln His Leu Gln Ser	Gln Phe Gly Leu	Leu Asp		
	185	190	195		
His Lys His Leu	Asp His Glu Val Ala	Lys Pro Ala Arg	Arg Lys		
	200	205	210		
Arg Leu Pro Glu	Met Ala Gln Pro Val	Asp Pro Ala His	Asn Val		
	215	220	225		
Ser Arg Leu His	Arg Leu Pro Arg Asp	Cys Gln Glu Leu	Phe Gln		
	230	235	240		
Val Gly Glu Arg	Gln Ser Gly Leu Phe	Glu Ile Gln Pro	Gln Gly		
	245	250	255		
Ser Pro Pro Phe	Leu Val Asn Cys Lys	Met Thr Ser Asp	Gly Gly		
	260	265	270		
Trp Thr Val Ile	Gln Arg Arg His Asp	Gly Ser Val Asp	Phe Asn		
	275	280	285		
Arg Pro Trp Glu	Ala Tyr Lys Ala Gly	Phe Gly Asp Pro	His Gly		
	290	295	300		
Glu Phe Trp Leu	Gly Leu Glu Lys Val	His Ser Ile Thr	Gly Asp		
	305	310	315		
Arg Asn Ser Arg	Leu Ala Val Gln Leu	Arg Asp Trp Asp	Gly Asn		
	320	325	330		
Ala Glu Leu Leu	Gln Phe Ser Val His	Leu Gly Gly Glu	Asp Thr		
	335	340	345		
Ala Tyr Ser Leu	Gln Leu Thr Ala Pro	Val Ala Gly Gln	Leu Gly		
	350	355	360		
Ala Thr Thr Val	Pro Pro Ser Gly Leu	Ser Val Pro Phe	Ser Thr		
	365	370	375		
Trp Asp Gln Asp	His Asp Leu Arg Arg	Asp Lys Asn Cys	Ala Lys		
	380	385	390		
Ser Leu Ser Gly	Gly Trp Trp Phe Gly	Thr Cys Ser His	Ser Asn		
	395	400	405		
Leu Asn Gly Gln	Tyr Phe Arg Ser Ile	Pro Gln Gln Arg	Gln Lys		
	410	415	420		

Leu Lys Lys Gly Ile Phe Trp Lys Thr Trp Arg Gly Arg Tyr Tyr
425 430 435

Pro Leu Gln Ala Thr Thr Met Leu Ile Gln Pro Met Ala Ala Glu
440 445 450

Ala Ala Ser

<210> 31

<211> 124

<212> PRT

<213> Homo sapiens

<400> 31

Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly
1 5 10 15

Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
20 25 30

Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
35 40 45

Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
50 55 60

Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
65 70 75

Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
80 85 90

Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
95 100 105

Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
110 115 120

Asp Leu Leu Thr

<210> 32

<211> 1752

<212> PRT

<213> Homo sapiens

<400> 32

Met Ala Gly Pro Arg Pro Ser Pro Trp Ala Arg Leu Leu Leu Ala
1 5 10 15

Ala Leu Ile Ser Val Ser Leu Ser Gly Thr Leu Ala Asn Arg Cys
20 25 30

Lys Lys Ala Pro Val Lys Ser Cys Thr Glu Cys Val Arg Val Asp
35 40 45

Lys Asp Cys Ala Tyr Cys Thr Asp Glu Met Phe Arg Asp Arg Arg

	50		55		60
Cys Asn Thr Gln	Ala 65	Glu Leu Leu Ala	Ala 70	Gly Cys Gln Arg	Glu 75
Ser Ile Val Val	Met 80	Glu Ser Ser Phe	Gln 85	Ile Thr Glu Glu	Thr 90
Gln Ile Asp Thr	Thr 95	Leu Arg Arg Ser	Gln 100	Met Ser Pro Gln	Gly 105
Leu Arg Val Arg	Leu 110	Arg Pro Gly Glu	Glu 115	Arg His Phe Glu	Leu 120
Glu Val Phe Glu	Pro 125	Leu Glu Ser Pro	Val 130	Asp Leu Tyr Ile	Leu 135
Met Asp Phe Ser	Asn 140	Ser Met Ser Asp	Asp 145	Leu Asp Asn Leu	Lys 150
Lys Met Gly Gln	Asn 155	Leu Ala Arg Val	Leu 160	Ser Gln Leu Thr	Ser 165
Asp Tyr Thr Ile	Gly 170	Phe Gly Lys Phe	Val 175	Asp Lys Val Ser	Val 180
Pro Gln Thr Asp	Met 185	Arg Pro Glu Lys	Leu 190	Lys Glu Pro Trp	Pro 195
Asn Ser Asp Pro	Pro 200	Phe Ser Phe Lys	Asn 205	Val Ile Ser Leu	Thr 210
Glu Asp Val Asp	Glu 215	Phe Arg Asn Lys	Leu 220	Gln Gly Glu Arg	Ile 225
Ser Gly Asn Leu	Asp 230	Ala Pro Glu Gly	Gly 235	Phe Asp Ala Ile	Leu 240
Gln Thr Ala Val	Cys 245	Thr Arg Asp Ile	Gly 250	Trp Arg Pro Asp	Ser 255
Thr His Leu Leu	Val 260	Phe Ser Thr Glu	Ser 265	Ala Phe His Tyr	Glu 270
Ala Asp Gly Ala	Asn 275	Val Leu Ala Gly	Ile 280	Met Ser Arg Asn	Asp 285
Glu Arg Cys His	Leu 290	Asp Thr Thr Gly	Thr 295	Tyr Thr Gln Tyr	Arg 300
Thr Gln Asp Tyr	Pro 305	Ser Val Pro Thr	Leu 310	Val Arg Leu Leu	Ala 315
Lys His Asn Ile	Ile 320	Pro Ile Phe Ala	Val 325	Thr Asn Tyr Ser	Tyr 330
Ser Tyr Tyr Glu	Lys 335	Leu His Thr Tyr	Phe 340	Pro Val Ser Ser	Leu 345

Gly Val Leu Gln Glu Asp Ser Ser Asn Ile Val Glu Leu Leu Glu	350	355	360
Glu Ala Phe Asn Arg Ile Arg Ser Asn Leu Asp Ile Arg Ala Leu	365	370	375
Asp Ser Pro Arg Gly Leu Arg Thr Glu Val Thr Ser Lys Met Phe	380	385	390
Gln Lys Thr Arg Thr Gly Ser Phe His Ile Arg Arg Gly Glu Val	395	400	405
Gly Ile Tyr Gln Val Gln Leu Arg Ala Leu Glu His Val Asp Gly	410	415	420
Thr His Val Cys Gln Leu Pro Glu Asp Gln Lys Gly Asn Ile His	425	430	435
Leu Lys Pro Ser Phe Ser Asp Gly Leu Lys Met Asp Ala Gly Ile	440	445	450
Ile Cys Asp Val Cys Thr Cys Glu Leu Gln Lys Glu Val Arg Ser	455	460	465
Ala Arg Cys Ser Phe Asn Gly Asp Phe Val Cys Gly Gln Cys Val	470	475	480
Cys Ser Glu Gly Trp Ser Gly Gln Thr Cys Asn Cys Ser Thr Gly	485	490	495
Ser Leu Ser Asp Ile Gln Pro Cys Leu Arg Glu Gly Glu Asp Lys	500	505	510
Pro Cys Ser Gly Arg Gly Glu Cys Gln Cys Gly His Cys Val Cys	515	520	525
Tyr Gly Glu Gly Arg Tyr Glu Gly Gln Phe Cys Glu Tyr Asp Asn	530	535	540
Phe Gln Cys Pro Arg Thr Ser Gly Phe Leu Cys Asn Asp Arg Gly	545	550	555
Arg Cys Ser Met Gly Gln Cys Val Cys Glu Pro Gly Trp Thr Gly	560	565	570
Pro Ser Cys Asp Cys Pro Leu Ser Asn Ala Thr Cys Ile Asp Ser	575	580	585
Asn Gly Gly Ile Cys Asn Gly Arg Gly His Cys Glu Cys Gly Arg	590	595	600
Cys His Cys His Gln Gln Ser Leu Tyr Thr Asp Thr Ile Cys Glu	605	610	615
Ile Asn Tyr Ser Ala Ile His Pro Gly Leu Cys Glu Asp Leu Arg	620	625	630
Ser Cys Val Gln Cys Gln Ala Trp Gly Thr Gly Glu Lys Lys Gly			

635	640	645
Arg Thr Cys Glu Glu Cys Asn Phe Lys	Val Lys Met Val Asp Glu	
650	655	660
Leu Lys Arg Ala Glu Glu Val Val Val	Arg Cys Ser Phe Arg Asp	
665	670	675
Glu Asp Asp Asp Cys Thr Tyr Ser Tyr	Thr Met Glu Gly Asp Gly	
680	685	690
Ala Pro Gly Pro Asn Ser Thr Val Leu	Val His Lys Lys Lys Asp	
695	700	705
Cys Pro Pro Gly Ser Phe Trp Trp Leu	Ile Pro Leu Leu Leu Leu	
710	715	720
Leu Leu Pro Leu Leu Ala Leu Leu Leu	Leu Leu Cys Trp Lys Tyr	
725	730	735
Cys Ala Cys Cys Lys Ala Cys Leu Ala	Leu Leu Pro Cys Cys Asn	
740	745	750
Arg Gly His Met Val Gly Phe Lys Glu	Asp His Tyr Met Leu Arg	
755	760	765
Glu Asn Leu Met Ala Ser Asp His Leu	Asp Thr Pro Met Leu Arg	
770	775	780
Ser Gly Asn Leu Lys Gly Arg Asp Val	Val Arg Trp Lys Val Thr	
785	790	795
Asn Asn Met Gln Arg Pro Gly Phe Ala	Thr His Ala Ala Ser Ile	
800	805	810
Asn Pro Thr Glu Leu Val Pro Tyr Gly	Leu Ser Leu Arg Leu Ala	
815	820	825
Arg Leu Cys Thr Glu Asn Leu Leu Lys	Pro Asp Thr Arg Glu Cys	
830	835	840
Ala Gln Leu Arg Gln Glu Val Glu Glu	Asn Leu Asn Glu Val Tyr	
845	850	855
Arg Gln Ile Ser Gly Val His Lys Leu	Gln Gln Thr Lys Phe Arg	
860	865	870
Gln Gln Pro Asn Ala Gly Lys Lys Gln	Asp His Thr Ile Val Asp	
875	880	885
Thr Val Leu Met Ala Pro Arg Ser Ala	Lys Pro Ala Leu Leu Lys	
890	895	900
Leu Thr Glu Lys Gln Val Glu Gln Arg	Ala Phe His Asp Leu Lys	
905	910	915
Val Ala Pro Gly Tyr Tyr Thr Leu Thr	Ala Asp Gln Asp Ala Arg	
920	925	930

Gly Met Val Glu Phe Gln Glu Gly Val Glu Leu Val Asp Val Arg	935	940	945
Val Pro Leu Phe Ile Arg Pro Glu Asp Asp Asp Glu Lys Gln Leu	950	955	960
Leu Val Glu Ala Ile Asp Val Pro Ala Gly Thr Ala Thr Leu Gly	965	970	975
Arg Arg Leu Val Asn Ile Thr Ile Ile Lys Glu Gln Ala Arg Asp	980	985	990
Val Val Ser Phe Glu Gln Pro Glu Phe Ser Val Ser Arg Gly Asp	995	1000	1005
Gln Val Ala Arg Ile Pro Val Ile Arg Arg Val Leu Asp Gly Gly	1010	1015	1020
Lys Ser Gln Val Ser Tyr Arg Thr Gln Asp Gly Thr Ala Gln Gly	1025	1030	1035
Asn Arg Asp Tyr Ile Pro Val Glu Gly Glu Leu Leu Phe Gln Pro	1040	1045	1050
Gly Glu Ala Trp Lys Glu Leu Gln Val Lys Leu Leu Glu Leu Gln	1055	1060	1065
Glu Val Asp Ser Leu Leu Arg Gly Arg Gln Val Arg Arg Phe His	1070	1075	1080
Val Gln Leu Ser Asn Pro Lys Phe Gly Ala His Leu Gly Gln Pro	1085	1090	1095
His Ser Thr Thr Ile Ile Ile Arg Asp Pro Asp Glu Leu Asp Arg	1100	1105	1110
Ser Phe Thr Ser Gln Met Leu Ser Ser Gln Pro Pro Pro His Gly	1115	1120	1125
Asp Leu Gly Ala Pro Gln Asn Pro Asn Ala Lys Ala Ala Gly Ser	1130	1135	1140
Arg Lys Ile His Phe Asn Trp Leu Pro Pro Ser Gly Lys Pro Met	1145	1150	1155
Gly Tyr Arg Val Lys Tyr Trp Ile Gln Gly Asp Ser Glu Ser Glu	1160	1165	1170
Ala His Leu Leu Asp Ser Lys Val Pro Ser Val Glu Leu Thr Asn	1175	1180	1185
Leu Tyr Pro Tyr Cys Asp Tyr Glu Met Lys Val Cys Ala Tyr Gly	1190	1195	1200
Ala Gln Gly Glu Gly Pro Tyr Ser Ser Leu Val Ser Cys Arg Thr	1205	1210	1215
His Gln Glu Val Pro Ser Glu Pro Gly Arg Leu Ala Phe Asn Val			

Val Ser Ser Thr Val Thr Gln Leu Ser Trp Ala Glu Pro Ala Glu	1220	1225	1230
1235	1240	1245	
Thr Asn Gly Glu Ile Thr Ala Tyr Glu Val Cys Tyr Gly Leu Val	1250	1255	1260
Asn Asp Asp Asn Arg Pro Ile Gly Pro Met Lys Lys Val Leu Val	1265	1270	1275
Asp Asn Pro Lys Asn Arg Met Leu Leu Ile Glu Asn Leu Arg Glu	1280	1285	1290
Ser Gln Pro Tyr Arg Tyr Thr Val Lys Ala Arg Asn Gly Ala Gly	1295	1300	1305
Trp Gly Pro Glu Arg Glu Ala Ile Ile Asn Leu Ala Thr Gln Pro	1310	1315	1320
Lys Arg Pro Met Ser Ile Pro Ile Ile Pro Asp Ile Pro Ile Val	1325	1330	1335
Asp Ala Gln Ser Gly Glu Asp Tyr Asp Ser Phe Leu Met Tyr Ser	1340	1345	1350
Asp Asp Val Leu Arg Ser Pro Ser Gly Ser Gln Arg Pro Ser Val	1355	1360	1365
Ser Asp Asp Thr Glu His Leu Val Asn Gly Arg Met Asp Phe Ala	1370	1375	1380
Phe Pro Gly Ser Thr Asn Ser Leu His Arg Met Thr Thr Thr Ser	1385	1390	1395
Ala Ala Ala Tyr Gly Thr His Leu Ser Pro His Val Pro His Arg	1400	1405	1410
Val Leu Ser Thr Ser Ser Thr Leu Thr Arg Asp Tyr Asn Ser Leu	1415	1420	1425
Thr Arg Ser Glu His Ser His Ser Thr Thr Leu Pro Arg Asp Tyr	1430	1435	1440
Ser Thr Leu Thr Ser Val Ser Ser His Asp Ser Arg Leu Thr Ala	1445	1450	1455
Gly Val Pro Asp Thr Pro Thr Arg Leu Val Phe Ser Ala Leu Gly	1460	1465	1470
Pro Thr Ser Leu Arg Val Ser Trp Gln Glu Pro Arg Cys Glu Arg	1475	1480	1485
Pro Leu Gln Gly Tyr Ser Val Glu Tyr Gln Leu Leu Asn Gly Gly	1490	1495	1500
Glu Leu His Arg Leu Asn Ile Pro Asn Pro Ala Gln Thr Ser Val	1505	1510	1515

Val	Val	Glu	Asp	Leu	Leu	Pro	Asn	His	Ser	Tyr	Val	Phe	Arg	Val	
				1520					1525					1530	
Arg	Ala	Gln	Ser	Gln	Glu	Gly	Trp	Gly	Arg	Glu	Arg	Glu	Gly	Val	
				1535					1540					1545	
Ile	Thr	Ile	Glu	Ser	Gln	Val	His	Pro	Gln	Ser	Pro	Leu	Cys	Pro	
				1550					1555					1560	
Leu	Pro	Gly	Ser	Ala	Phe	Thr	Leu	Ser	Thr	Pro	Ser	Ala	Pro	Gly	
				1565					1570					1575	
Pro	Leu	Val	Phe	Thr	Ala	Leu	Ser	Pro	Asp	Ser	Leu	Gln	Leu	Ser	
				1580					1585					1590	
Trp	Glu	Arg	Pro	Arg	Arg	Pro	Asn	Gly	Asp	Ile	Val	Gly	Tyr	Leu	
				1595					1600					1605	
Val	Thr	Cys	Glu	Met	Ala	Gln	Gly	Gly	Gly	Pro	Ala	Thr	Ala	Phe	
				1610					1615					1620	
Arg	Val	Asp	Gly	Asp	Ser	Pro	Glu	Ser	Arg	Leu	Thr	Val	Pro	Gly	
				1625					1630					1635	
Leu	Ser	Glu	Asn	Val	Pro	Tyr	Lys	Phe	Lys	Val	Gln	Ala	Arg	Thr	
				1640					1645					1650	
Thr	Glu	Gly	Phe	Gly	Pro	Glu	Arg	Glu	Gly	Ile	Ile	Thr	Ile	Glu	
				1655					1660					1665	
Ser	Gln	Asp	Gly	Gly	Pro	Phe	Pro	Gln	Leu	Gly	Ser	Arg	Ala	Gly	
				1670					1675					1680	
Leu	Phe	Gln	His	Pro	Leu	Gln	Ser	Glu	Tyr	Ser	Ser	Ile	Thr	Thr	
				1685					1690					1695	
Thr	His	Thr	Ser	Ala	Thr	Glu	Pro	Phe	Leu	Val	Asp	Gly	Pro	Thr	
				1700					1705					1710	
Leu	Gly	Ala	Gln	His	Leu	Glu	Ala	Gly	Gly	Ser	Leu	Thr	Arg	His	
				1715					1720					1725	
Val	Thr	Gln	Glu	Phe	Val	Ser	Arg	Thr	Leu	Thr	Thr	Ser	Gly	Thr	
				1730					1735					1740	
Leu	Ser	Thr	His	Met	Asp	Gln	Gln	Phe	Phe	Gln	Thr				
				1745					1750						

<210> 33

<211> 1336

<212> PRT

<213> Homo sapiens .

<400> 33

Met	Thr	Leu	Asp	Arg	Pro	Gly	Glu	Gly	Ala	Thr	Met	Leu	Lys	Thr	
1				5					10					15	

Phe Thr Val Leu Leu Phe Cys Ile Arg Met Ser Leu Gly Met Thr

	20	25	30
Ser Ile Val Met Asp	Pro Gln Pro Glu	Leu Trp Ile Glu	Ser Asn
35		40	45
Tyr Pro Gln Ala Pro	Trp Glu Asn Ile	Thr Leu Trp Cys	Arg Ser
50		55	60
Pro Ser Arg Ile Ser	Ser Lys Phe Leu	Leu Lys Asp Lys	Thr
65		70	75
Gln Met Thr Trp Ile	Arg Pro Ser His	Lys Thr Phe Gln	Val Ser
80		85	90
Phe Leu Ile Gly Ala	Leu Thr Glu Ser	Asn Ala Gly Leu	Tyr Arg
95		100	105
Cys Cys Tyr Trp Lys	Glu Thr Gly Trp	Ser Lys Pro Ser	Lys Val
110		115	120
Leu Glu Leu Glu Ala	Pro Gly Gln Leu	Pro Lys Pro Ile	Phe Trp
125		130	135
Ile Gln Ala Glu Thr	Pro Ala Leu Pro	Gly Cys Asn Val	Asn Ile
140		145	150
Leu Cys His Gly Trp	Leu Gln Asp Leu	Val Phe Met Leu	Phe Lys
155		160	165
Glu Gly Tyr Ala Glu	Pro Val Asp Tyr	Gln Val Pro Thr	Gly Thr
170		175	180
Met Ala Ile Phe Ser	Ile Asp Asn Leu	Thr Pro Glu Asp	Glu Gly
185		190	195
Val Tyr Ile Cys Arg	Thr His Ile Gln	Met Leu Pro Thr	Leu Trp
200		205	210
Ser Glu Pro Ser Asn	Pro Leu Lys Leu	Val Val Ala Gly	Leu Tyr
215		220	225
Pro Lys Pro Thr Leu	Thr Ala His Pro	Gly Pro Ile Met	Ala Pro
230		235	240
Gly Glu Ser Leu Asn	Leu Arg Cys Gln	Gly Pro Ile Tyr	Gly Met
245		250	255
Thr Phe Ala Leu Met	Arg Val Glu Asp	Leu Glu Lys Ser	Phe Tyr
260		265	270
His Lys Lys Thr Ile	Lys Asn Glu Ala	Asn Phe Phe Phe	Gln Ser
275		280	285
Leu Lys Ile Gln Asp	Thr Gly His Tyr	Leu Cys Phe Tyr	Tyr Asp
290		295	300
Ala Ser Tyr Arg Gly	Ser Leu Leu Ser	Asp Val Leu Lys	Ile Trp
305		310	315

Val	Thr	Asp	Thr	Phe	Pro	Lys	Thr	Trp	Leu	Leu	Ala	Arg	Pro	Ser	
				320					325					330	
Ala	Val	Val	Gln	Met	Gly	Gln	Asn	Val	Ser	Leu	Arg	Cys	Arg	Gly	
				335					340					345	
Pro	Val	Asp	Gly	Val	Gly	Leu	Ala	Leu	Tyr	Lys	Lys	Gly	Glu	Asp	
				350					355					360	
Lys	Pro	Leu	Gln	Phe	Leu	Asp	Ala	Thr	Ser	Ile	Asp	Asp	Asn	Thr	
				365					370					375	
Ser	Phe	Phe	Leu	Asn	Asn	Val	Thr	Tyr	Ser	Asp	Thr	Gly	Ile	Tyr	
				380					385					390	
Ser	Cys	His	Tyr	Leu	Leu	Thr	Trp	Lys	Thr	Ser	Ile	Arg	Met	Pro	
				395					400					405	
Ser	His	Asn	Thr	Val	Glu	Leu	Met	Val	Val	Asp	Lys	Pro	Pro	Lys	
				410					415					420	
Pro	Ser	Leu	Ser	Ala	Trp	Pro	Ser	Thr	Val	Phe	Lys	Leu	Gly	Lys	
				425					430					435	
Ala	Ile	Thr	Leu	Gln	Cys	Arg	Val	Ser	His	Pro	Val	Leu	Glu	Phe	
				440					445					450	
Ser	Leu	Glu	Trp	Glu	Glu	Arg	Glu	Thr	Phe	Gln	Arg	Phe	Ser	Val	
				455					460					465	
Asn	Gly	Asp	Phe	Ile	Ile	Ser	Asn	Val	Asp	Gly	Lys	Gly	Thr	Gly	
				470					475					480	
Thr	Tyr	Ser	Cys	Ser	Tyr	Arg	Val	Glu	Thr	His	Pro	Asn	Met	Trp	
				485					490					495	
Ser	His	Arg	Ser	Glu	Pro	Leu	Lys	Leu	Met	Gly	Pro	Ala	Gly	Tyr	
				500					505					510	
Leu	Thr	Trp	Asn	Tyr	Val	Leu	Asn	Glu	Ala	Ile	Arg	Leu	Ser	Leu	
				515					520					525	
Ile	Met	Gln	Leu	Val	Ala	Leu	Leu	Leu	Val	Val	Leu	Trp	Ile	Arg	
				530					535					540	
Trp	Lys	Cys	Arg	Arg	Leu	Arg	Ile	Arg	Glu	Ala	Trp	Leu	Leu	Gly	
				545					550					555	
Thr	Ala	Gln	Gly	Val	Thr	Met	Leu	Phe	Ile	Val	Thr	Ala	Leu	Leu	
				560					565					570	
Cys	Cys	Gly	Leu	Cys	Asn	Gly	Val	Leu	Ile	Glu	Glu	Thr	Glu	Ile	
				575					580					585	
Val	Met	Pro	Thr	Pro	Lys	Pro	Glu	Leu	Trp	Ala	Glu	Thr	Asn	Phe	
				590					595					600	
Pro	Leu	Ala	Pro	Trp	Lys	Asn	Leu	Thr	Leu	Trp	Cys	Arg	Ser	Pro	

	605		610		615
Ser Gly Ser Thr	Lys Glu Phe Val Leu	Leu Lys Asp Gly Thr	Gly		
	620		625		630
Trp Ile Ala Thr	Arg Pro Ala Ser Glu	Gln Val Arg Ala Ala	Phe		
	635		640		645
Pro Leu Gly Ala	Leu Thr Gln Ser His	Thr Gly Ser Tyr His	Cys		
	650		655		660
His Ser Trp Glu	Glu Met Ala Val Ser	Glu Pro Ser Glu Ala	Leu		
	665		670		675
Glu Leu Val Gly	Thr Asp Ile Leu Pro	Lys Pro Val Ile Ser	Ala		
	680		685		690
Ser Pro Thr Ile	Arg Gly Gln Glu Leu	Gln Leu Arg Cys Lys	Gly		
	695		700		705
Trp Leu Ala Gly	Met Gly Phe Ala Leu	Tyr Lys Glu Gly Glu	Gln		
	710		715		720
Glu Pro Val Gln	Gln Leu Gly Ala Val	Gly Arg Glu Ala Phe	Phe		
	725		730		735
Thr Ile Gln Arg	Met Glu Asp Lys Asp	Glu Gly Asn Tyr Ser	Cys		
	740		745		750
Arg Thr His Thr	Glu Lys Leu Pro Phe	Lys Trp Ser Glu Pro	Ser		
	755		760		765
Glu Pro Leu Glu	Leu Val Ile Lys Glu	Met Tyr Pro Lys Pro	Phe		
	770		775		780
Phe Lys Thr Trp	Ala Ser Pro Val Val	Thr Pro Gly Ala Arg	Val		
	785		790		795
Thr Phe Asn Cys	Ser Thr Pro His Gln	His Met Ser Phe Ile	Leu		
	800		805		810
Tyr Lys Asp Gly	Ser Glu Ile Ala Ser	Ser Asp Arg Ser Trp	Ala		
	815		820		825
Ser Pro Gly Ala	Ser Ala Ala His Phe	Leu Ile Ile Ser Val	Gly		
	830		835		840
Ile Gly Asp Gly	Gly Asn Tyr Ser Cys	Arg Tyr Tyr Asp Phe	Ser		
	845		850		855
Ile Trp Ser Glu	Pro Ser Asp Pro Val	Glu Leu Val Val Thr	Glu		
	860		865		870
Phe Tyr Pro Lys	Pro Thr Leu Leu Ala	Gln Pro Gly Pro Val	Val		
	875		880		885
Phe Pro Gly Lys	Ser Val Ile Leu Arg	Cys Gln Gly Thr Phe	Gln		
	890		895		900

Gly	Met	Arg	Phe	Ala	Leu	Leu	Gln	Glu	Gly	Ala	His	Val	Pro	Leu	
				905					910					915	
Gln	Phe	Arg	Ser	Val	Ser	Gly	Asn	Ser	Ala	Asp	Phe	Leu	Leu	His	
				920					925					930	
Thr	Val	Gly	Ala	Glu	Asp	Ser	Gly	Asn	Tyr	Ser	Cys	Ile	Tyr	Tyr	
				935					940					945	
Glu	Thr	Thr	Met	Ser	Asn	Arg	Gly	Ser	Tyr	Leu	Ser	Met	Pro	Leu	
				950					955					960	
Met	Ile	Trp	Val	Thr	Asp	Thr	Phe	Pro	Lys	Pro	Trp	Leu	Phe	Ala	
				965					970					975	
Glu	Pro	Ser	Ser	Val	Val	Pro	Met	Gly	Gln	Asn	Val	Thr	Leu	Trp	
				980					985					990	
Cys	Arg	Gly	Pro	Val	His	Gly	Val	Gly	Tyr	Ile	Leu	His	Lys	Glu	
				995					1000					1005	
Gly	Glu	Ala	Thr	Ser	Met	Gln	Leu	Trp	Gly	Ser	Thr	Ser	Asn	Asp	
				1010					1015					1020	
Gly	Ala	Phe	Pro	Ile	Thr	Asn	Ile	Ser	Gly	Thr	Ser	Met	Gly	Arg	
				1025					1030					1035	
Tyr	Ser	Cys	Cys	Tyr	His	Pro	Asp	Trp	Thr	Ser	Ser	Ile	Lys	Ile	
				1040					1045					1050	
Gln	Pro	Ser	Asn	Thr	Leu	Glu	Leu	Leu	Val	Thr	Gly	Leu	Leu	Pro	
				1055					1060					1065	
Lys	Pro	Ser	Leu	Leu	Ala	Gln	Pro	Gly	Pro	Met	Val	Ala	Pro	Gly	
				1070					1075					1080	
Glu	Asn	Met	Thr	Leu	Gln	Cys	Gln	Gly	Glu	Leu	Pro	Asp	Ser	Thr	
				1085					1090					1095	
Phe	Val	Leu	Leu	Lys	Glu	Gly	Ala	Gln	Glu	Pro	Leu	Glu	Gln	Gln	
				1100					1105					1110	
Arg	Pro	Ser	Gly	Tyr	Arg	Ala	Asp	Phe	Trp	Met	Pro	Ala	Val	Arg	
				1115					1120					1125	
Gly	Glu	Asp	Ser	Gly	Ile	Tyr	Ser	Cys	Val	Tyr	Tyr	Leu	Asp	Ser	
				1130					1135					1140	
Thr	Pro	Phe	Ala	Ala	Ser	Asn	His	Ser	Asp	Ser	Leu	Glu	Ile	Trp	
				1145					1150					1155	
Val	Thr	Asp	Lys	Pro	Pro	Lys	Pro	Ser	Leu	Ser	Ala	Trp	Pro	Ser	
				1160					1165					1170	
Thr	Met	Phe	Lys	Leu	Gly	Lys	Asp	Ile	Thr	Leu	Gln	Cys	Arg	Gly	
				1175					1180					1185	
Pro	Leu	Pro	Gly	Val	Glu	Phe	Val	Leu	Glu	His	Asp	Gly	Glu	Glu	

1190	1195	1200
Ala Pro Gln Gln Phe Ser Glu Asp Gly Asp Phe Val Ile Asn Asn 1205 1210 1215		
Val Glu Gly Lys Gly Ile Gly Asn Tyr Ser Cys Ser Tyr Arg Leu 1220 1225 1230		
Gln Ala Tyr Pro Asp Ile Trp Ser Glu Pro Ser Asp Pro Leu Glu 1235 1240 1245		
Leu Val Gly Ala Ala Gly Pro Val Ala Gln Glu Cys Thr Val Gly 1250 1255 1260		
Asn Ile Val Arg Ser Ser Leu Ile Val Val Val Val Ala Leu 1265 1270 1275		
Gly Val Val Leu Ala Ile Glu Trp Lys Lys Trp Pro Arg Leu Arg 1280 1285 1290		
Thr Arg Gly Ser Glu Thr Asp Gly Arg Asp Gln Thr Ile Ala Leu 1295 1300 1305		
Glu Glu Cys Asn Gln Glu Gly Glu Pro Gly Thr Pro Ala Asn Ser 1310 1315 1320		
Pro Ser Ser Thr Ser Gln Arg Ile Ser Val Glu Leu Pro Val Pro 1325 1330 1335		

Ile

<210> 34
 <211> 1907
 <212> PRT
 <213> Homo sapiens

<400> 34

Met Ala Pro Glu Pro Ala Pro Gly Arg Thr Met Val Pro Leu Val 1 5 10 15
Pro Ala Leu Val Met Leu Gly Leu Val Ala Gly Ala His Gly Asp 20 25 30
Ser Lys Pro Val Phe Ile Lys Val Pro Glu Asp Gln Thr Gly Leu 35 40 45
Ser Gly Gly Val Ala Ser Phe Val Cys Gln Ala Thr Gly Glu Pro 50 55 60
Lys Pro Arg Ile Thr Trp Met Lys Lys Gly Lys Lys Val Ser Ser 65 70 75
Gln Arg Phe Glu Val Ile Glu Phe Asp Asp Gly Ala Gly Ser Val 80 85 90
Leu Arg Ile Gln Pro Leu Arg Val Gln Arg Asp Glu Ala Ile Tyr 95 100 105

Glu	Cys	Thr	Ala	Thr	Asn	Ser	Leu	Gly	Glu	Ile	Asn	Thr	Ser	Ala	
				110					115					120	
Lys	Leu	Ser	Val	Leu	Glu	Glu	Glu	Gln	Leu	Pro	Pro	Gly	Phe	Pro	
				125					130					135	
Ser	Ile	Asp	Met	Gly	Pro	Gln	Leu	Lys	Val	Val	Glu	Lys	Ala	Arg	
				140					145					150	
Thr	Ala	Thr	Met	Leu	Cys	Ala	Ala	Gly	Gly	Asn	Pro	Asp	Pro	Glu	
				155					160					165	
Ile	Ser	Trp	Phe	Lys	Asp	Phe	Leu	Pro	Val	Asp	Pro	Ala	Thr	Ser	
				170					175					180	
Asn	Gly	Arg	Ile	Lys	Gln	Leu	Arg	Ser	Gly	Ala	Leu	Gln	Ile	Glu	
				185					190					195	
Ser	Ser	Glu	Glu	Ser	Asp	Gln	Gly	Lys	Tyr	Glu	Cys	Val	Ala	Thr	
				200					205					210	
Asn	Ser	Ala	Gly	Thr	Arg	Tyr	Ser	Ala	Pro	Ala	Asn	Leu	Tyr	Val	
				215					220					225	
Arg	Val	Arg	Arg	Val	Ala	Pro	Arg	Phe	Ser	Ile	Pro	Pro	Ser	Ser	
				230					235					240	
Gln	Glu	Val	Met	Pro	Gly	Gly	Ser	Val	Asn	Leu	Thr	Cys	Val	Ala	
				245					250					255	
Val	Gly	Ala	Pro	Met	Pro	Tyr	Val	Lys	Trp	Met	Met	Gly	Ala	Glu	
				260					265					270	
Glu	Leu	Thr	Lys	Glu	Asp	Glu	Met	Pro	Val	Gly	Arg	Asn	Val	Leu	
				275					280					285	
Glu	Leu	Ser	Asn	Val	Val	Arg	Ser	Ala	Asn	Tyr	Thr	Cys	Val	Ala	
				290					295					300	
Ile	Ser	Ser	Leu	Gly	Met	Ile	Glu	Ala	Thr	Ala	Gln	Val	Thr	Val	
				305					310					315	
Lys	Ala	Leu	Pro	Lys	Pro	Pro	Ile	Asp	Leu	Val	Val	Thr	Glu	Thr	
				320					325					330	
Thr	Ala	Thr	Ser	Val	Thr	Leu	Thr	Trp	Asp	Ser	Gly	Asn	Ser	Glu	
				335					340					345	
Pro	Val	Thr	Tyr	Tyr	Gly	Ile	Gln	Tyr	Arg	Ala	Ala	Gly	Thr	Glu	
				350					355					360	
Gly	Pro	Phe	Gln	Glu	Val	Asp	Gly	Val	Ala	Thr	Thr	Arg	Tyr	Ser	
				365					370					375	
Ile	Gly	Gly	Leu	Ser	Pro	Phe	Ser	Glu	Tyr	Ala	Phe	Arg	Val	Leu	
				380					385					390	
Ala	Val	Asn	Ser	Ile	Gly	Arg	Gly	Pro	Pro	Ser	Glu	Ala	Val	Arg	

				395						400					405
Ala	Arg	Thr	Gly	Glu	Gln	Ala	Pro	Ser	Ser	Pro	Pro	Arg	Arg	Val	
				410					415					420	
Gln	Ala	Arg	Met	Leu	Ser	Ala	Ser	Thr	Met	Leu	Val	Gln	Trp	Glu	
				425					430					435	
Pro	Pro	Glu	Glu	Pro	Asn	Gly	Leu	Val	Arg	Gly	Tyr	Arg	Val	Tyr	
				440					445					450	
Tyr	Thr	Pro	Asp	Ser	Arg	Arg	Pro	Pro	Asn	Ala	Trp	His	Lys	His	
				455					460					465	
Asn	Thr	Asp	Ala	Gly	Leu	Leu	Thr	Thr	Val	Gly	Ser	Leu	Leu	Pro	
				470					475					480	
Gly	Ile	Thr	Tyr	Ser	Leu	Arg	Val	Leu	Ala	Phe	Thr	Ala	Val	Gly	
				485					490					495	
Asp	Gly	Pro	Pro	Ser	Pro	Thr	Ile	Gln	Val	Lys	Thr	Gln	Gln	Gly	
				500					505					510	
Val	Pro	Ala	Gln	Pro	Ala	Asp	Phe	Gln	Ala	Glu	Val	Glu	Ser	Asp	
				515					520					525	
Thr	Arg	Ile	Gln	Leu	Ser	Trp	Leu	Leu	Pro	Pro	Gln	Glu	Arg	Ile	
				530					535					540	
Ile	Met	Tyr	Glu	Leu	Val	Tyr	Trp	Ala	Ala	Glu	Asp	Glu	Asp	Gln	
				545					550					555	
Gln	His	Lys	Val	Thr	Phe	Asp	Pro	Thr	Ser	Ser	Tyr	Thr	Leu	Glu	
				560					565					570	
Asp	Leu	Lys	Pro	Asp	Thr	Leu	Tyr	Arg	Phe	Gln	Leu	Ala	Ala	Arg	
				575					580					585	
Ser	Asp	Met	Gly	Val	Gly	Val	Phe	Thr	Pro	Thr	Ile	Glu	Ala	Arg	
				590					595					600	
Thr	Ala	Gln	Ser	Thr	Pro	Ser	Ala	Pro	Pro	Gln	Lys	Val	Met	Cys	
				605					610					615	
Val	Ser	Met	Gly	Ser	Thr	Thr	Val	Arg	Val	Ser	Trp	Val	Pro	Pro	
				620					625					630	
Pro	Ala	Asp	Ser	Arg	Asn	Gly	Val	Ile	Thr	Gln	Tyr	Ser	Val	Ala	
				635					640					645	
His	Glu	Ala	Val	Asp	Gly	Glu	Asp	Arg	Gly	Arg	His	Val	Val	Asp	
				650					655					660	
Gly	Ile	Ser	Arg	Glu	His	Ser	Ser	Trp	Asp	Leu	Val	Gly	Leu	Glu	
				665					670					675	
Lys	Trp	Thr	Glu	Tyr	Arg	Val	Trp	Val	Arg	Ala	His	Thr	Asp	Val	
				680					685					690	

Gly	Pro	Gly	Pro	Glu	Ser	Ser	Pro	Val	Leu	Val	Arg	Thr	Asp	Glu	
				695					700					705	
Asp	Val	Pro	Ser	Gly	Pro	Pro	Arg	Lys	Val	Glu	Val	Glu	Pro	Leu	
				710					715					720	
Asn	Ser	Thr	Ala	Val	His	Val	Tyr	Trp	Lys	Leu	Pro	Val	Pro	Ser	
				725					730					735	
Lys	Gln	His	Gly	Gln	Ile	Arg	Gly	Tyr	Gln	Val	Thr	Tyr	Val	Arg	
				740					745					750	
Leu	Glu	Asn	Gly	Glu	Pro	Arg	Gly	Leu	Pro	Ile	Ile	Gln	Asp	Val	
				755					760					765	
Met	Leu	Ala	Glu	Ala	Gln	Trp	Arg	Pro	Glu	Glu	Ser	Glu	Asp	Tyr	
				770					775					780	
Glu	Thr	Thr	Ile	Ser	Gly	Leu	Thr	Pro	Glu	Thr	Thr	Tyr	Ser	Val	
				785					790					795	
Thr	Val	Ala	Ala	Tyr	Thr	Thr	Lys	Gly	Asp	Gly	Ala	Arg	Ser	Lys	
				800					805					810	
Pro	Lys	Ile	Val	Thr	Thr	Thr	Gly	Ala	Val	Pro	Gly	Arg	Pro	Thr	
				815					820					825	
Met	Met	Ile	Ser	Thr	Thr	Ala	Met	Asn	Thr	Ala	Leu	Leu	Gln	Trp	
				830					835					840	
His	Pro	Pro	Lys	Glu	Leu	Pro	Gly	Glu	Leu	Leu	Gly	Tyr	Arg	Leu	
				845					850					855	
Gln	Tyr	Cys	Arg	Ala	Asp	Glu	Ala	Arg	Pro	Asn	Thr	Ile	Asp	Phe	
				860					865					870	
Gly	Lys	Asp	Asp	Gln	His	Phe	Thr	Val	Thr	Gly	Leu	His	Lys	Gly	
				875					880					885	
Thr	Thr	Tyr	Ile	Phe	Arg	Leu	Ala	Ala	Lys	Asn	Arg	Ala	Gly	Leu	
				890					895					900	
Gly	Glu	Glu	Phe	Glu	Lys	Glu	Ile	Arg	Thr	Pro	Glu	Asp	Leu	Pro	
				905					910					915	
Ser	Gly	Phe	Pro	Gln	Asn	Leu	His	Val	Thr	Gly	Leu	Thr	Thr	Ser	
				920					925					930	
Thr	Thr	Glu	Leu	Ala	Trp	Asp	Pro	Pro	Val	Leu	Ala	Glu	Arg	Asn	
				935					940					945	
Gly	Arg	Ile	Ile	Ser	Tyr	Thr	Val	Val	Phe	Arg	Asp	Ile	Asn	Ser	
				950					955					960	
Gln	Gln	Glu	Leu	Gln	Asn	Ile	Thr	Thr	Asp	Thr	Arg	Phe	Thr	Leu	
				965					970					975	
Thr	Gly	Leu	Lys	Pro	Asp	Thr	Thr	Tyr	Asp	Ile	Lys	Val	Arg	Ala	

980										985					990				
Trp	Thr	Ser	Lys	Gly	Ser	Gly	Pro	Leu	Ser	Pro	Ser	Ile	Gln	Ser					
				995					1000					1005					
Arg	Thr	Met	Pro	Val	Glu	Gln	Val	Phe	Ala	Lys	Asn	Phe	Arg	Val					
				1010					1015					1020					
Ala	Ala	Ala	Met	Lys	Thr	Ser	Val	Leu	Leu	Ser	Trp	Glu	Val	Pro					
				1025					1030					1035					
Asp	Ser	Tyr	Lys	Ser	Ala	Val	Pro	Phe	Lys	Ile	Leu	Tyr	Asn	Gly					
				1040					1045					1050					
Gln	Ser	Val	Glu	Val	Asp	Gly	His	Ser	Met	Arg	Lys	Leu	Ile	Ala					
				1055					1060					1065					
Asp	Leu	Gln	Pro	Asn	Thr	Glu	Tyr	Ser	Phe	Val	Leu	Met	Asn	Arg					
				1070					1075					1080					
Gly	Ser	Ser	Ala	Gly	Gly	Leu	Gln	His	Leu	Val	Ser	Ile	Arg	Thr					
				1085					1090					1095					
Ala	Pro	Asp	Leu	Leu	Pro	His	Lys	Pro	Leu	Pro	Ala	Ser	Ala	Tyr					
				1100					1105					1110					
Ile	Glu	Asp	Gly	Arg	Phe	Asp	Leu	Ser	Met	Pro	His	Val	Gln	Asp					
				1115					1120					1125					
Pro	Ser	Leu	Val	Arg	Trp	Phe	Tyr	Ile	Val	Val	Val	Pro	Ile	Asp					
				1130					1135					1140					
Arg	Val	Gly	Gly	Ser	Met	Leu	Thr	Pro	Arg	Trp	Ser	Thr	Pro	Glu					
				1145					1150					1155					
Glu	Leu	Glu	Leu	Asp	Glu	Leu	Leu	Glu	Ala	Ile	Glu	Gln	Gly	Gly					
				1160					1165					1170					
Glu	Glu	Gln	Arg	Arg	Arg	Arg	Arg	Gln	Ala	Glu	Arg	Leu	Lys	Pro					
				1175					1180					1185					
Tyr	Val	Ala	Ala	Gln	Leu	Asp	Val	Leu	Pro	Glu	Thr	Phe	Thr	Leu					
				1190					1195					1200					
Gly	Asp	Lys	Lys	Asn	Tyr	Arg	Gly	Phe	Tyr	Asn	Arg	Pro	Leu	Ser					
				1205					1210					1215					
Pro	Asp	Leu	Ser	Tyr	Gln	Cys	Phe	Val	Leu	Ala	Ser	Leu	Lys	Glu					
				1220					1225					1230					
Pro	Met	Asp	Gln	Lys	Arg	Tyr	Ala	Ser	Ser	Pro	Tyr	Ser	Asp	Glu					
				1235					1240					1245					
Ile	Val	Val	Gln	Val	Thr	Pro	Ala	Gln	Gln	Gln	Glu	Glu	Pro	Glu					
				1250					1255					1260					
Met	Leu	Trp	Val	Thr	Gly	Pro	Val	Leu	Ala	Val	Ile	Leu	Ile	Ile					
				1265					1270					1275					

Leu Ile Val Ile Ala Ile Leu Leu Phe Lys Arg Lys Arg Thr His	1280	1285	1290
Ser Pro Ser Ser Lys Asp Glu Gln Ser Ile Gly Leu Lys Asp Ser	1295	1300	1305
Leu Leu Ala His Ser Ser Asp Pro Val Glu Met Arg Arg Leu Asn	1310	1315	1320
Tyr Gln Thr Pro Gly Met Arg Asp His Pro Pro Ile Pro Ile Thr	1325	1330	1335
Asp Leu Ala Asp Asn Ile Glu Arg Leu Lys Ala Asn Asp Gly Leu	1340	1345	1350
Lys Phe Ser Gln Glu Tyr Glu Ser Ile Asp Pro Gly Gln Gln Phe	1355	1360	1365
Thr Trp Glu Asn Ser Asn Leu Glu Val Asn Lys Pro Lys Asn Arg	1370	1375	1380
Tyr Ala Asn Val Ile Ala Tyr Asp His Ser Arg Val Ile Leu Thr	1385	1390	1395
Ser Ile Asp Gly Val Pro Gly Ser Asp Tyr Ile Asn Ala Asn Tyr	1400	1405	1410
Ile Asp Gly Tyr Arg Lys Gln Asn Ala Tyr Ile Ala Thr Gln Gly	1415	1420	1425
Pro Leu Pro Glu Thr Met Gly Asp Phe Trp Arg Met Val Trp Glu	1430	1435	1440
Gln Arg Thr Ala Thr Val Val Met Met Thr Arg Leu Glu Glu Lys	1445	1450	1455
Ser Arg Val Lys Cys Asp Gln Tyr Trp Pro Ala Arg Gly Thr Glu	1460	1465	1470
Thr Cys Gly Leu Ile Gln Val Thr Leu Leu Asp Thr Val Glu Leu	1475	1480	1485
Ala Thr Tyr Thr Val Arg Thr Phe Ala Leu His Lys Ser Gly Ser	1490	1495	1500
Ser Glu Lys Arg Glu Leu Arg Gln Phe Gln Phe Met Ala Trp Pro	1505	1510	1515
Asp His Gly Val Pro Glu Tyr Pro Thr Pro Ile Leu Ala Phe Leu	1520	1525	1530
Arg Arg Val Lys Ala Cys Asn Pro Leu Asp Ala Gly Pro Met Val	1535	1540	1545
Val His Cys Ser Ala Gly Val Gly Arg Thr Gly Cys Phe Ile Val	1550	1555	1560
Ile Asp Ala Met Leu Glu Arg Met Lys His Glu Lys Thr Val Asp			

1565	1570	1575
Ile Tyr Gly His Val Thr Cys Met Arg Ser Gln Arg Asn Tyr Met 1580	1585	1590
Val Gln Thr Glu Asp Gln Tyr Val Phe Ile His Glu Ala Leu Leu 1595	1600	1605
Glu Ala Ala Thr Cys Gly His Thr Glu Val Pro Ala Arg Asn Leu 1610	1615	1620
Tyr Ala His Ile Gln Lys Leu Gly Gln Val Pro Pro Gly Glu Ser 1625	1630	1635
Val Thr Ala Met Glu Leu Glu Phe Lys Leu Leu Ala Ser Ser Lys 1640	1645	1650
Ala His Thr Ser Arg Phe Ile Ser Ala Asn Leu Pro Cys Asn Lys 1655	1660	1665
Phe Lys Asn Arg Leu Val Asn Ile Met Pro Tyr Glu Leu Thr Arg 1670	1675	1680
Val Cys Leu Gln Pro Ile Arg Gly Val Glu Gly Ser Asp Tyr Ile 1685	1690	1695
Asn Ala Ser Phe Leu Asp Gly Tyr Arg Gln Gln Lys Ala Tyr Ile 1700	1705	1710
Ala Thr Gln Gly Pro Leu Ala Glu Ser Thr Glu Asp Phe Trp Arg 1715	1720	1725
Met Leu Trp Glu His Asn Ser Thr Ile Ile Val Met Leu Thr Lys 1730	1735	1740
Leu Arg Glu Met Gly Arg Glu Lys Cys His Gln Tyr Trp Pro Ala 1745	1750	1755
Glu Arg Ser Ala Arg Tyr Gln Tyr Phe Val Val Asp Pro Met Ala 1760	1765	1770
Glu Tyr Asn Met Pro Gln Tyr Ile Leu Arg Glu Phe Lys Val Thr 1775	1780	1785
Asp Ala Arg Asp Gly Gln Ser Arg Thr Ile Arg Gln Phe Gln Phe 1790	1795	1800
Thr Asp Trp Pro Glu Gln Gly Val Pro Lys Thr Gly Glu Gly Phe 1805	1810	1815
Ile Asp Phe Ile Gly Gln Val His Lys Thr Lys Glu Gln Phe Gly 1820	1825	1830
Gln Asp Gly Pro Ile Thr Val His Cys Ser Ala Gly Val Gly Arg 1835	1840	1845
Thr Gly Val Phe Ile Thr Leu Ser Ile Val Leu Glu Arg Met Arg 1850	1855	1860

Tyr Glu Gly Val Val Asp Met Phe Gln Thr Val Lys Thr Leu Arg
1865 1870 1875

Thr Gln Arg Pro Ala Met Val Gln Thr Glu Asp Gln Tyr Gln Leu
1880 1885 1890

Cys Tyr Arg Ala Ala Leu Glu Tyr Leu Gly Ser Phe Asp His Tyr
1895 1900 1905

Ala Thr

<210> 35

<211> 310

<212> PRT

<213> Homo sapiens

<400> 35

Met Arg Arg Ala Ala Leu Trp Leu Trp Leu Cys Ala Leu Ala Leu
1 5 10 15

Ser Leu Gln Leu Ala Leu Pro Gln Ile Val Ala Thr Asn Leu Pro
20 25 30

Pro Glu Asp Gln Asp Gly Ser Gly Asp Asp Ser Asp Asn Phe Ser
35 40 45

Gly Ser Gly Ala Gly Ala Leu Gln Asp Ile Thr Leu Ser Gln Gln
50 55 60

Thr Pro Ser Thr Trp Lys Asp Thr Gln Leu Leu Thr Ala Ile Pro
65 70 75

Thr Ser Pro Glu Pro Thr Gly Leu Glu Ala Thr Ala Ala Ser Thr
80 85 90

Ser Thr Leu Pro Ala Gly Glu Gly Pro Lys Glu Gly Glu Ala Val
95 100 105

Val Leu Pro Glu Val Glu Pro Gly Leu Thr Ala Arg Glu Gln Glu
110 115 120

Ala Thr Pro Arg Pro Arg Glu Thr Thr Gln Leu Pro Thr Thr His
125 130 135

Gln Ala Ser Thr Thr Thr Ala Thr Thr Ala Gln Glu Pro Ala Thr
140 145 150

Ser His Pro His Arg Asp Met Gln Pro Gly His His Glu Thr Ser
155 160 165

Thr Pro Ala Gly Pro Ser Gln Ala Asp Leu His Thr Pro His Thr
170 175 180

Glu Asp Gly Gly Pro Ser Ala Thr Glu Arg Ala Ala Glu Asp Gly
185 190 195

Ala Ser Ser Gln Leu Pro Ala Ala Glu Gly Ser Gly Glu Gln Asp

	200		205		210
Phe Thr Phe Glu Thr Ser Gly Glu Asn Thr Ala Val Val Ala Val	215		220		225
Glu Pro Asp Arg Arg Asn Gln Ser Pro Val Asp Gln Gly Ala Thr	230		235		240
Gly Ala Ser Gln Gly Leu Leu Asp Arg Lys Glu Val Leu Gly Gly	245		250		255
Val Ile Ala Gly Gly Leu Val Gly Leu Ile Phe Ala Val Cys Leu	260		265		270
Val Gly Phe Met Leu Tyr Arg Met Lys Lys Lys Asp Glu Gly Ser	275		280		285
Tyr Ser Leu Glu Glu Pro Lys Gln Ala Asn Gly Gly Ala Tyr Gln	290		295		300
Lys Pro Thr Lys Gln Glu Glu Phe Tyr Ala	305		310		

<210> 36
 <211> 131
 <212> PRT
 <213> Homo sapiens

<400> 36
Met Lys Ile Phe Leu Pro Val Leu Leu Ala Ala Leu Leu Gly Val
1 5 10 15
Glu Arg Ala Ser Ser Leu Met Cys Phe Ser Cys Leu Asn Gln Lys
20 25 30
Ser Asn Leu Tyr Cys Leu Lys Pro Thr Ile Cys Ser Asp Gln Asp
35 40 45
Asn Tyr Cys Val Thr Val Ser Ala Ser Ala Gly Ile Gly Asn Leu
50 55 60
Val Thr Phe Gly His Ser Leu Ser Lys Thr Cys Ser Pro Ala Cys
65 70 75
Pro Ile Pro Glu Gly Val Asn Val Gly Val Ala Ser Met Gly Ile
80 85 90
Ser Cys Cys Gln Ser Phe Leu Cys Asn Phe Ser Ala Ala Asp Gly
95 100 105
Gly Leu Arg Ala Ser Val Thr Leu Leu Gly Ala Gly Leu Leu Leu
110 115 120
Ser Leu Leu Pro Ala Leu Leu Arg Phe Gly Pro
125 130

<210> 37
 <211> 249

<212> PRT
 <213> Homo sapiens

<400> 37

Met	Asp	Gly	Lys	Lys	Cys	Ser	Val	Trp	Met	Phe	Leu	Pro	Leu	Val	1	5	10	15
Phe	Thr	Leu	Phe	Thr	Ser	Ala	Gly	Leu	Trp	Ile	Val	Tyr	Phe	Ile	20	25	30	
Ala	Val	Glu	Asp	Asp	Lys	Ile	Leu	Pro	Leu	Asn	Ser	Ala	Glu	Arg	35	40	45	
Lys	Pro	Gly	Val	Lys	His	Ala	Pro	Tyr	Ile	Ser	Ile	Ala	Gly	Asp	50	55	60	
Asp	Pro	Pro	Ala	Ser	Cys	Val	Phe	Ser	Gln	Val	Met	Asn	Met	Ala	65	70	75	
Ala	Phe	Leu	Ala	Leu	Val	Val	Ala	Val	Leu	Arg	Phe	Ile	Gln	Leu	80	85	90	
Lys	Pro	Lys	Val	Leu	Asn	Pro	Trp	Leu	Asn	Ile	Ser	Gly	Leu	Val	95	100	105	
Ala	Leu	Cys	Leu	Ala	Ser	Phe	Gly	Met	Thr	Leu	Leu	Gly	Asn	Phe	110	115	120	
Gln	Leu	Thr	Asn	Asp	Glu	Glu	Ile	His	Asn	Val	Gly	Thr	Ser	Leu	125	130	135	
Thr	Phe	Gly	Phe	Gly	Thr	Leu	Thr	Cys	Trp	Ile	Gln	Ala	Ala	Leu	140	145	150	
Thr	Leu	Lys	Val	Asn	Ile	Lys	Asn	Glu	Gly	Arg	Arg	Val	Gly	Ile	155	160	165	
Pro	Arg	Val	Ile	Leu	Ser	Ala	Ser	Ile	Thr	Leu	Cys	Val	Val	Leu	170	175	180	
Tyr	Phe	Ile	Leu	Met	Ala	Gln	Ser	Ile	His	Met	Tyr	Ala	Ala	Arg	185	190	195	
Val	Gln	Trp	Gly	Leu	Val	Met	Cys	Phe	Leu	Ser	Tyr	Phe	Gly	Thr	200	205	210	
Phe	Ala	Val	Glu	Phe	Arg	His	Tyr	Arg	Tyr	Glu	Ile	Val	Cys	Ser	215	220	225	
Glu	Tyr	Gln	Glu	Asn	Phe	Leu	Ser	Phe	Ser	Glu	Ser	Leu	Ser	Glu	230	235	240	
Ala	Ser	Glu	Tyr	Gln	Thr	Asp	Gln	Val	245									

<210> 38
 <211> 145
 <212> PRT

<213> Homo sapiens

<400> 38

Met	Glu	Leu	Ala	Leu	Leu	Cys	Gly	Leu	Val	Val	Met	Ala	Gly	Val	
1				5					10					15	
Ile	Pro	Ile	Gln	Gly	Gly	Ile	Leu	Asn	Leu	Asn	Lys	Met	Val	Lys	
				20					25					30	
Gln	Val	Thr	Gly	Lys	Met	Pro	Ile	Leu	Ser	Tyr	Trp	Pro	Tyr	Gly	
				35					40					45	
Cys	His	Cys	Gly	Leu	Gly	Gly	Arg	Gly	Gln	Pro	Lys	Asp	Ala	Thr	
				50					55					60	
Asp	Trp	Cys	Cys	Gln	Thr	His	Asp	Cys	Cys	Tyr	Asp	His	Leu	Lys	
				65					70					75	
Thr	Gln	Gly	Cys	Gly	Ile	Tyr	Lys	Asp	Tyr	Tyr	Arg	Tyr	Asn	Phe	
				80					85					90	
Ser	Gln	Gly	Asn	Ile	His	Cys	Ser	Asp	Lys	Gly	Ser	Trp	Cys	Glu	
				95					100					105	
Gln	Gln	Leu	Cys	Ala	Cys	Asp	Lys	Glu	Val	Ala	Phe	Cys	Leu	Lys	
				110					115					120	
Arg	Asn	Leu	Asp	Thr	Tyr	Gln	Lys	Arg	Leu	Arg	Phe	Tyr	Trp	Arg	
				125					130					135	
Pro	His	Cys	Arg	Gly	Gln	Thr	Pro	Gly	Cys						
				140					145						

<210> 39

<211> 1533

<212> PRT

<213> Homo sapiens

<400> 39

Met	Tyr	Ile	Arg	Val	Ser	Tyr	Asp	Thr	Lys	Pro	Asp	Ser	Leu	Leu	
1				5					10					15	
His	Leu	Met	Val	Lys	Asp	Trp	Gln	Leu	Glu	Leu	Pro	Lys	Leu	Leu	
				20					25					30	
Ile	Ser	Val	His	Gly	Gly	Leu	Gln	Asn	Phe	Glu	Met	Gln	Pro	Lys	
				35					40					45	
Leu	Lys	Gln	Val	Phe	Gly	Lys	Gly	Leu	Ile	Lys	Ala	Ala	Met	Thr	
				50					55					60	
Thr	Gly	Ala	Trp	Ile	Phe	Thr	Gly	Gly	Val	Ser	Thr	Gly	Val	Ile	
				65					70					75	
Ser	His	Val	Gly	Asp	Ala	Leu	Lys	Asp	His	Ser	Ser	Lys	Ser	Arg	
				80					85					90	
Gly	Arg	Val	Cys	Ala	Ile	Gly	Ile	Ala	Pro	Trp	Gly	Ile	Val	Glu	

Leu	Glu	Gln	Ala	Met	Leu	Asp	Ala	Leu	Val	Leu	Asp	Arg	Val	Asp	395	400	405
Phe	Val	Lys	Leu	Leu	Ile	Glu	Asn	Gly	Val	Asn	Met	Gln	His	Phe	410	415	420
Leu	Thr	Ile	Pro	Arg	Leu	Glu	Glu	Leu	Tyr	Asn	Thr	Arg	Leu	Gly	425	430	435
Pro	Pro	Asn	Thr	Leu	His	Leu	Leu	Val	Arg	Asp	Val	Lys	Lys	Ser	440	445	450
Asn	Leu	Pro	Pro	Asp	Tyr	His	Ile	Ser	Leu	Ile	Asp	Ile	Gly	Leu	455	460	465
Val	Leu	Glu	Tyr	Leu	Met	Gly	Gly	Ala	Tyr	Arg	Cys	Asn	Tyr	Thr	470	475	480
Arg	Lys	Asn	Phe	Arg	Thr	Leu	Tyr	Asn	Asn	Leu	Phe	Gly	Pro	Lys	485	490	495
Arg	Pro	Lys	Ala	Leu	Lys	Leu	Leu	Gly	Met	Glu	Asp	Asp	Glu	Pro	500	505	510
Pro	Ala	Lys	Gly	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Glu	Glu	Glu	515	520	525
Ile	Asp	Ile	Asp	Val	Asp	Asp	Pro	Ala	Val	Ser	Arg	Phe	Gln	Tyr	530	535	540
Pro	Phe	His	Glu	Leu	Met	Val	Trp	Ala	Val	Leu	Met	Lys	Arg	Gln	545	550	555
Lys	Met	Ala	Val	Phe	Leu	Trp	Gln	Arg	Gly	Glu	Glu	Ser	Met	Ala	560	565	570
Lys	Ala	Leu	Val	Ala	Cys	Lys	Leu	Tyr	Lys	Ala	Met	Ala	His	Glu	575	580	585
Ser	Ser	Glu	Ser	Asp	Leu	Val	Asp	Asp	Ile	Ser	Gln	Asp	Leu	Asp	590	595	600
Asn	Asn	Ser	Lys	Asp	Phe	Gly	Gln	Leu	Ala	Leu	Glu	Leu	Leu	Asp	605	610	615
Gln	Ser	Tyr	Lys	His	Asp	Glu	Gln	Ile	Ala	Met	Lys	Leu	Leu	Thr	620	625	630
Tyr	Glu	Leu	Lys	Asn	Trp	Ser	Asn	Ser	Thr	Cys	Leu	Lys	Leu	Ala	635	640	645
Val	Ala	Ala	Lys	His	Arg	Asp	Phe	Ile	Ala	His	Thr	Cys	Ser	Gln	650	655	660
Met	Leu	Leu	Thr	Asp	Met	Trp	Met	Gly	Arg	Leu	Arg	Met	Arg	Lys	665	670	675
Asn	Pro	Gly	Leu	Lys	Val	Ile	Met	Gly	Ile	Leu	Leu	Pro	Pro	Thr			

	680		685		690
Ile Leu Phe Leu	Glu Phe Arg Thr Tyr	Asp Asp Phe Ser Tyr	Gln		
	695		700		705
Thr Ser Lys Glu	Asn Glu Asp Gly Lys	Glu Lys Glu Glu Glu	Asn		
	710		715		720
Thr Asp Ala Asn	Ala Asp Ala Gly Ser	Arg Lys Gly Asp Glu	Glu		
	725		730		735
Asn Glu His Lys	Lys Gln Arg Ser Ile	Pro Ile Gly Thr Lys	Ile		
	740		745		750
Cys Glu Phe Tyr	Asn Ala Pro Ile Val	Lys Phe Trp Phe Tyr	Thr		
	755		760		765
Ile Ser Tyr Leu	Gly Tyr Leu Leu Leu	Phe Asn Tyr Val Ile	Leu		
	770		775		780
Val Arg Met Asp	Gly Trp Pro Ser Leu	Gln Glu Trp Ile Val	Ile		
	785		790		795
Ser Tyr Ile Val	Ser Leu Ala Leu Glu	Lys Ile Arg Glu Ile	Leu		
	800		805		810
Met Ser Glu Pro	Gly Lys Leu Ser Gln	Lys Ile Lys Val Trp	Leu		
	815		820		825
Gln Glu Tyr Trp	Asn Ile Thr Asp Leu	Val Ala Ile Ser Thr	Phe		
	830		835		840
Met Ile Gly Ala	Ile Leu Arg Leu Gln	Asn Gln Pro Tyr Met	Gly		
	845		850		855
Tyr Gly Arg Val	Ile Tyr Cys Val Asp	Ile Ile Phe Trp Tyr	Ile		
	860		865		870
Arg Val Leu Asp	Ile Phe Gly Val Asn	Lys Tyr Leu Gly Pro	Tyr		
	875		880		885
Val Met Met Ile	Gly Lys Met Met Ile	Asp Met Leu Tyr Phe	Val		
	890		895		900
Val Ile Met Leu	Val Val Leu Met Ser	Phe Gly Val Ala Arg	Gln		
	905		910		915
Ala Ile Leu His	Pro Glu Glu Lys Pro	Ser Trp Lys Leu Ala	Arg		
	920		925		930
Asn Ile Phe Tyr	Met Pro Tyr Trp Met	Ile Tyr Gly Glu Val	Phe		
	935		940		945
Ala Asp Gln Ile	Asp Leu Tyr Ala Met	Glu Ile Asn Pro Pro	Cys		
	950		955		960
Gly Glu Asn Leu	Tyr Asp Glu Glu Gly	Lys Arg Leu Pro Pro	Cys		
	965		970		975

Ile	Pro	Gly	Ala	Trp	Leu	Thr	Pro	Ala	Leu	Met	Ala	Cys	Tyr	Leu	
				980					985					990	
Leu	Val	Ala	Asn	Ile	Leu	Leu	Val	Asn	Leu	Leu	Ile	Ala	Val	Phe	
				995					1000					1005	
Asn	Asn	Thr	Phe	Phe	Glu	Val	Lys	Ser	Ile	Ser	Asn	Gln	Val	Trp	
				1010					1015					1020	
Lys	Phe	Gln	Arg	Tyr	Gln	Leu	Ile	Met	Thr	Phe	His	Asp	Arg	Pro	
				1025					1030					1035	
Val	Leu	Pro	Pro	Pro	Met	Ile	Ile	Leu	Ser	His	Ile	Tyr	Ile	Ile	
				1040					1045					1050	
Ile	Met	Arg	Leu	Ser	Gly	Arg	Cys	Arg	Lys	Lys	Arg	Glu	Gly	Asp	
				1055					1060					1065	
Gln	Glu	Glu	Arg	Asp	Arg	Gly	Leu	Lys	Leu	Phe	Leu	Ser	Asp	Glu	
				1070					1075					1080	
Glu	Leu	Lys	Arg	Leu	His	Glu	Phe	Glu	Glu	Gln	Cys	Val	Gln	Glu	
				1085					1090					1095	
His	Phe	Arg	Glu	Lys	Glu	Asp	Glu	Gln	Gln	Ser	Ser	Ser	Asp	Glu	
				1100					1105					1110	
Arg	Ile	Arg	Val	Thr	Ser	Glu	Arg	Val	Glu	Asn	Met	Ser	Met	Arg	
				1115					1120					1125	
Leu	Glu	Glu	Ile	Asn	Glu	Arg	Glu	Thr	Phe	Met	Lys	Thr	Ser	Leu	
				1130					1135					1140	
Gln	Thr	Val	Asp	Leu	Arg	Leu	Ala	Gln	Leu	Glu	Glu	Leu	Ser	Asn	
				1145					1150					1155	
Arg	Met	Val	Asn	Ala	Leu	Glu	Asn	Leu	Ala	Gly	Ile	Asp	Arg	Ser	
				1160					1165					1170	
Asp	Leu	Ile	Gln	Ala	Arg	Ser	Arg	Ala	Ser	Ser	Glu	Cys	Glu	Ala	
				1175					1180					1185	
Thr	Tyr	Leu	Leu	Arg	Gln	Ser	Ser	Ile	Asn	Ser	Ala	Asp	Gly	Tyr	
				1190					1195					1200	
Ser	Leu	Tyr	Arg	Tyr	His	Phe	Asn	Gly	Glu	Glu	Leu	Leu	Phe	Glu	
				1205					1210					1215	
Asp	Thr	Ser	Leu	Ser	Thr	Ser	Pro	Gly	Thr	Gly	Val	Arg	Lys	Lys	
				1220					1225					1230	
Thr	Cys	Ser	Phe	Arg	Ile	Lys	Glu	Glu	Lys	Asp	Val	Lys	Thr	His	
				1235					1240					1245	
Leu	Val	Pro	Glu	Cys	Gln	Asn	Ser	Leu	His	Leu	Ser	Leu	Gly	Thr	
				1250					1255					1260	
Ser	Thr	Ser	Ala	Thr	Pro	Asp	Gly	Ser	His	Leu	Ala	Val	Asp	Asp	

1265	1270	1275
Leu Lys Asn Ala Glu Glu Ser Lys Leu Gly Pro Asp Ile Gly Ile		
1280	1285	1290
Ser Lys Glu Asp Asp Glu Arg Gln Thr Asp Ser Lys Lys Glu Glu		
1295	1300	1305
Thr Ile Ser Pro Ser Leu Asn Lys Thr Asp Val Ile His Gly Gln		
1310	1315	1320
Asp Lys Ser Asp Val Gln Asn Thr Gln Leu Thr Val Glu Thr Thr		
1325	1330	1335
Asn Ile Glu Gly Thr Ile Ser Tyr Pro Leu Glu Glu Thr Lys Ile		
1340	1345	1350
Thr Arg Tyr Phe Pro Asp Glu Thr Ile Asn Ala Cys Lys Thr Met		
1355	1360	1365
Lys Ser Arg Ser Phe Val Tyr Ser Arg Gly Arg Lys Leu Val Gly		
1370	1375	1380
Gly Val Asn Gln Asp Val Glu Tyr Ser Ser Ile Thr Asp Gln Gln		
1385	1390	1395
Leu Thr Thr Glu Trp Gln Cys Gln Val Gln Lys Ile Thr Arg Ser		
1400	1405	1410
His Ser Thr Asp Ile Pro Tyr Ile Val Ser Glu Ala Ala Val Gln		
1415	1420	1425
Ala Glu Gln Lys Glu Gln Phe Ala Asp Met Gln Asp Glu His His		
1430	1435	1440
Val Ala Glu Ala Ile Pro Arg Ile Pro Arg Leu Ser Leu Thr Ile		
1445	1450	1455
Thr Asp Arg Asn Gly Met Glu Asn Leu Leu Ser Val Lys Pro Asp		
1460	1465	1470
Gln Thr Leu Gly Phe Pro Ser Leu Arg Ser Lys Ser Leu His Gly		
1475	1480	1485
His Pro Arg Asn Val Lys Ser Ile Gln Gly Lys Leu Asp Arg Ser		
1490	1495	1500
Gly His Ala Ser Ser Val Ser Ser Leu Val Ile Val Ser Gly Met		
1505	1510	1515
Thr Ala Glu Glu Lys Lys Val Lys Lys Glu Lys Ala Ser Thr Glu		
1520	1525	1530
Thr Glu Cys		

<210> 40
<211> 462

<212> PRT

<213> Homo sapiens

<400> 40

Met	Ser	Thr	Glu	Lys	Val	Asp	Gln	Lys	Glu	Glu	Ala	Gly	Glu	Lys
1				5					10					15
Glu	Val	Cys	Gly	Asp	Gln	Ile	Lys	Gly	Pro	Asp	Lys	Glu	Glu	Glu
				20					25					30
Pro	Pro	Ala	Ala	Ala	Ser	His	Gly	Gln	Gly	Trp	Arg	Pro	Gly	Gly
				35					40					45
Arg	Ala	Ala	Arg	Asn	Ala	Arg	Pro	Glu	Pro	Gly	Ala	Arg	His	Pro
				50					55					60
Ala	Leu	Pro	Ala	Met	Val	Asn	Asp	Pro	Pro	Val	Pro	Ala	Leu	Leu
				65					70					75
Trp	Ala	Gln	Glu	Val	Gly	Gln	Val	Leu	Ala	Gly	Arg	Ala	Arg	Arg
				80					85					90
Leu	Leu	Leu	Gln	Phe	Gly	Val	Leu	Phe	Cys	Thr	Ile	Leu	Leu	Leu
				95					100					105
Leu	Trp	Val	Ser	Val	Phe	Leu	Tyr	Gly	Ser	Phe	Tyr	Tyr	Ser	Tyr
				110					115					120
Met	Pro	Thr	Val	Ser	His	Leu	Ser	Pro	Val	His	Phe	Tyr	Tyr	Arg
				125					130					135
Thr	Asp	Cys	Asp	Ser	Ser	Thr	Thr	Ser	Leu	Cys	Ser	Phe	Pro	Val
				140					145					150
Ala	Asn	Val	Ser	Leu	Thr	Lys	Gly	Gly	Arg	Asp	Arg	Val	Leu	Met
				155					160					165
Tyr	Gly	Gln	Pro	Tyr	Arg	Val	Thr	Leu	Glu	Leu	Glu	Leu	Pro	Glu
				170					175					180
Ser	Pro	Val	Asn	Gln	Asp	Leu	Gly	Met	Phe	Leu	Val	Thr	Ile	Ser
				185					190					195
Cys	Tyr	Thr	Arg	Gly	Gly	Arg	Ile	Ile	Ser	Thr	Ser	Ser	Arg	Ser
				200					205					210
Val	Met	Leu	His	Tyr	Arg	Ser	Asp	Leu	Leu	Gln	Met	Leu	Asp	Thr
				215					220					225
Leu	Val	Phe	Ser	Ser	Leu	Leu	Leu	Phe	Gly	Phe	Ala	Glu	Gln	Lys
				230					235					240
Gln	Leu	Leu	Glu	Val	Glu	Leu	Tyr	Ala	Asp	Tyr	Arg	Glu	Asn	Ser
				245					250					255
Tyr	Val	Pro	Thr	Thr	Gly	Ala	Ile	Ile	Glu	Ile	His	Ser	Lys	Arg
				260					265					270

Ile	Gln	Leu	Tyr	Gly	Ala	Tyr	Leu	Arg	Ile	His	Ala	His	Phe	Thr	
				275					280					285	
Gly	Leu	Arg	Tyr	Leu	Leu	Tyr	Asn	Phe	Pro	Met	Thr	Cys	Ala	Phe	
				290					295					300	
Ile	Gly	Val	Ala	Ser	Asn	Phe	Thr	Phe	Leu	Ser	Val	Ile	Val	Leu	
				305					310					315	
Phe	Ser	Tyr	Met	Gln	Trp	Val	Trp	Gly	Gly	Ile	Trp	Pro	Arg	His	
				320					325					330	
Arg	Phe	Ser	Leu	Gln	Val	Asn	Ile	Arg	Lys	Arg	Asp	Asn	Ser	Arg	
				335					340					345	
Lys	Glu	Val	Gln	Arg	Arg	Ile	Ser	Ala	His	Gln	Pro	Gly	Pro	Glu	
				350					355					360	
Gly	Gln	Glu	Glu	Ser	Thr	Pro	Gln	Ser	Asp	Val	Thr	Glu	Asp	Gly	
				365					370					375	
Glu	Ser	Pro	Glu	Asp	Pro	Ser	Gly	Thr	Glu	Gly	Gln	Leu	Ser	Glu	
				380					385					390	
Glu	Glu	Lys	Pro	Asp	Gln	Gln	Pro	Leu	Ser	Gly	Glu	Glu	Glu	Leu	
				395					400					405	
Glu	Pro	Glu	Ala	Ser	Asp	Gly	Ser	Gly	Ser	Trp	Glu	Asp	Ala	Ala	
				410					415					420	
Leu	Leu	Thr	Glu	Ala	Asn	Leu	Pro	Ala	Pro	Ala	Pro	Ala	Ser	Ala	
				425					430					435	
Ser	Ala	Pro	Val	Leu	Glu	Thr	Leu	Gly	Ser	Ser	Glu	Pro	Ala	Gly	
				440					445					450	
Gly	Ala	Leu	Arg	Gln	Arg	Pro	Thr	Cys	Ser	Ser	Ser				
				455					460						

<210> 41
 <211> 1015
 <212> PRT
 <213> Homo sapiens

<400> 41
 Met Gly Pro Pro Leu Pro Leu Leu Leu Leu Leu Leu Leu Leu Leu
 1 5 10 15
 Pro Pro Arg Val Leu Pro Ala Ala Pro Ser Ser Val Pro Arg Gly
 20 25 30
 Arg Gln Leu Pro Gly Arg Leu Gly Cys Leu Leu Glu Glu Gly Leu
 35 40 45
 Cys Gly Ala Ser Glu Ala Cys Val Asn Asp Gly Val Phe Gly Arg
 50 55 60
 Cys Gln Lys Val Pro Ala Met Asp Phe Tyr Arg Tyr Glu Val Ser

65										70					75				
Pro	Val	Ala	Leu	Gln	Arg	Leu	Arg	Val	Ala	Leu	Gln	Lys	Leu	Ser					
				80					85					90					
Gly	Thr	Gly	Phe	Thr	Trp	Gln	Asp	Asp	Tyr	Thr	Gln	Tyr	Val	Met					
				95					100					105					
Asp	Gln	Glu	Leu	Ala	Asp	Leu	Pro	Lys	Thr	Tyr	Leu	Arg	Arg	Pro					
				110					115					120					
Glu	Ala	Ser	Ser	Pro	Ala	Arg	Pro	Ser	Lys	His	Ser	Val	Gly	Ser					
				125					130					135					
Glu	Arg	Arg	Tyr	Ser	Arg	Glu	Gly	Gly	Ala	Ala	Leu	Ala	Asn	Ala					
				140					145					150					
Leu	Arg	Arg	His	Leu	Pro	Phe	Leu	Glu	Ala	Leu	Ser	Gln	Ala	Pro					
				155					160					165					
Ala	Ser	Asp	Val	Leu	Ala	Arg	Thr	His	Thr	Ala	Gln	Asp	Arg	Pro					
				170					175					180					
Pro	Ala	Glu	Gly	Asp	Asp	Arg	Phe	Ser	Glu	Ser	Ile	Leu	Thr	Tyr					
				185					190					195					
Val	Ala	His	Thr	Ser	Ala	Leu	Thr	Tyr	Pro	Pro	Gly	Pro	Arg	Thr					
				200					205					210					
Gln	Leu	Arg	Glu	Asp	Leu	Leu	Pro	Arg	Thr	Leu	Gly	Gln	Leu	Gln					
				215					220					225					
Pro	Asp	Glu	Leu	Ser	Pro	Lys	Val	Asp	Ser	Gly	Val	Asp	Arg	His					
				230					235					240					
His	Leu	Met	Ala	Ala	Leu	Ser	Ala	Tyr	Ala	Ala	Gln	Arg	Pro	Pro					
				245					250					255					
Ala	Pro	Pro	Gly	Glu	Gly	Ser	Leu	Glu	Pro	Gln	Tyr	Leu	Leu	Arg					
				260					265					270					
Ala	Pro	Ser	Arg	Met	Pro	Arg	Pro	Leu	Leu	Ala	Pro	Ala	Ala	Pro					
				275					280					285					
Gln	Lys	Trp	Pro	Ser	Pro	Leu	Gly	Asp	Ser	Glu	Asp	Pro	Ser	Ser					
				290					295					300					
Thr	Gly	Asp	Gly	Ala	Arg	Ile	His	Thr	Leu	Leu	Lys	Asp	Leu	Gln					
				305					310					315					
Arg	Gln	Pro	Ala	Glu	Val	Arg	Gly	Leu	Ser	Gly	Leu	Glu	Leu	Asp					
				320					325					330					
Gly	Met	Ala	Glu	Leu	Met	Ala	Gly	Leu	Met	Gln	Gly	Val	Asp	His					
				335					340					345					
Gly	Val	Ala	Arg	Gly	Ser	Pro	Gly	Arg	Ala	Ala	Leu	Gly	Glu	Ser					
				350					355					360					

Gly	Glu	Gln	Ala	Asp	Gly	Pro	Lys	Ala	Thr	Leu	Arg	Gly	Asp	Ser	
				365					370					375	
Phe	Pro	Asp	Asp	Gly	Val	Gln	Asp	Asp	Asp	Asp	Arg	Leu	Tyr	Gln	
				380					385					390	
Glu	Val	His	Arg	Leu	Ser	Ala	Thr	Leu	Gly	Gly	Leu	Leu	Gln	Asp	
				395					400					405	
His	Gly	Ser	Arg	Leu	Leu	Pro	Gly	Ala	Leu	Pro	Phe	Ala	Arg	Pro	
				410					415					420	
Leu	Asp	Met	Glu	Arg	Lys	Lys	Ser	Glu	His	Pro	Glu	Ser	Ser	Leu	
				425					430					435	
Ser	Ser	Glu	Glu	Glu	Thr	Ala	Gly	Val	Glu	Asn	Val	Lys	Ser	Gln	
				440					445					450	
Thr	Tyr	Ser	Lys	Asp	Leu	Leu	Gly	Gln	Gln	Pro	His	Ser	Glu	Pro	
				455					460					465	
Gly	Ala	Ala	Ala	Phe	Gly	Glu	Leu	Gln	Asn	Gln	Met	Pro	Gly	Pro	
				470					475					480	
Ser	Lys	Glu	Glu	Gln	Ser	Leu	Pro	Ala	Gly	Ala	Gln	Glu	Ala	Leu	
				485					490					495	
Ser	Asp	Gly	Leu	Gln	Leu	Glu	Val	Gln	Pro	Ser	Glu	Glu	Glu	Ala	
				500					505					510	
Arg	Gly	Tyr	Ile	Val	Thr	Asp	Arg	Asp	Pro	Leu	Arg	Pro	Glu	Glu	
				515					520					525	
Gly	Arg	Arg	Leu	Val	Glu	Asp	Val	Ala	Arg	Leu	Leu	Gln	Val	Pro	
				530					535					540	
Ser	Ser	Ala	Phe	Ala	Asp	Val	Glu	Val	Leu	Gly	Pro	Ala	Val	Thr	
				545					550					555	
Phe	Lys	Val	Ser	Ala	Asn	Val	Gln	Asn	Val	Thr	Thr	Glu	Asp	Val	
				560					565					570	
Glu	Lys	Ala	Thr	Val	Asp	Asn	Lys	Asp	Lys	Leu	Glu	Glu	Thr	Ser	
				575					580					585	
Gly	Leu	Lys	Ile	Leu	Gln	Thr	Gly	Val	Gly	Ser	Lys	Ser	Lys	Leu	
				590					595					600	
Lys	Phe	Leu	Pro	Pro	Gln	Ala	Glu	Gln	Glu	Asp	Ser	Thr	Lys	Phe	
				605					610					615	
Ile	Ala	Leu	Thr	Leu	Val	Ser	Leu	Ala	Cys	Ile	Leu	Gly	Val	Leu	
				620					625					630	
Leu	Ala	Ser	Gly	Leu	Ile	Tyr	Cys	Leu	Arg	His	Ser	Ser	Gln	His	
				635					640					645	
Arg	Leu	Lys	Glu	Lys	Leu	Ser	Gly	Leu	Gly	Gly	Asp	Pro	Gly	Ala	

				650						655					660
Asp	Ala	Thr	Ala	Ala	Tyr	Gln	Glu	Leu	Cys	Arg	Gln	Arg	Met	Ala	
				665						670				675	
Thr	Arg	Pro	Pro	Asp	Arg	Pro	Glu	Gly	Pro	His	Thr	Ser	Arg	Ile	
				680						685				690	
Ser	Ser	Val	Ser	Ser	Gln	Phe	Ser	Asp	Gly	Pro	Ile	Pro	Ser	Pro	
				695					700					705	
Ser	Ala	Arg	Ser	Ser	Ala	Ser	Ser	Trp	Ser	Glu	Glu	Pro	Val	Gln	
				710					715					720	
Ser	Asn	Met	Asp	Ile	Ser	Thr	Gly	His	Met	Ile	Leu	Ser	Tyr	Met	
				725					730					735	
Glu	Asp	His	Leu	Lys	Asn	Lys	Asn	Arg	Leu	Glu	Lys	Glu	Trp	Glu	
				740					745					750	
Ala	Leu	Cys	Ala	Tyr	Gln	Ala	Glu	Pro	Asn	Ser	Ser	Phe	Val	Ala	
				755					760					765	
Gln	Arg	Glu	Glu	Asn	Val	Pro	Lys	Asn	Arg	Ser	Leu	Ala	Val	Leu	
				770					775					780	
Thr	Tyr	Asp	His	Ser	Arg	Val	Leu	Leu	Lys	Ala	Glu	Asn	Ser	His	
				785					790					795	
Ser	His	Ser	Asp	Tyr	Ile	Asn	Ala	Ser	Pro	Ile	Met	Asp	His	Asp	
				800					805					810	
Pro	Arg	Asn	Pro	Ala	Tyr	Ile	Ala	Thr	Gln	Gly	Pro	Leu	Pro	Ala	
				815					820					825	
Thr	Val	Ala	Asp	Phe	Trp	Gln	Met	Val	Trp	Glu	Ser	Gly	Cys	Val	
				830					835					840	
Val	Ile	Val	Met	Leu	Thr	Pro	Leu	Ala	Glu	Asn	Gly	Val	Arg	Gln	
				845					850					855	
Cys	Tyr	His	Tyr	Trp	Pro	Asp	Glu	Gly	Ser	Asn	Leu	Tyr	His	Ile	
				860					865					870	
Tyr	Glu	Val	Asn	Leu	Val	Ser	Glu	His	Ile	Trp	Cys	Glu	Asp	Phe	
				875					880					885	
Leu	Val	Arg	Ser	Phe	Tyr	Leu	Lys	Asn	Leu	Gln	Thr	Asn	Glu	Thr	
				890					895					900	
Arg	Thr	Val	Thr	Gln	Phe	His	Phe	Leu	Ser	Trp	Tyr	Asp	Arg	Gly	
				905					910					915	
Val	Pro	Ser	Ser	Ser	Arg	Ser	Leu	Leu	Asp	Phe	Arg	Arg	Lys	Val	
				920					925					930	
Asn	Lys	Cys	Tyr	Arg	Gly	Arg	Ser	Cys	Pro	Ile	Ile	Val	His	Cys	
				935					940					945	

Ser	Asp	Gly	Ala	Gly	Arg	Ser	Gly	Thr	Tyr	Val	Leu	Ile	Asp	Met
				950					955					960
Val	Leu	Asn	Lys	Met	Ala	Lys	Gly	Ala	Lys	Glu	Ile	Asp	Ile	Ala
				965					970					975
Ala	Thr	Leu	Glu	His	Leu	Arg	Asp	Gln	Arg	Pro	Gly	Met	Val	Gln
				980					985					990
Thr	Lys	Glu	Gln	Phe	Glu	Phe	Ala	Leu	Thr	Ala	Val	Ala	Glu	Glu
				995					1000					1005
Val	Asn	Ala	Ile	Leu	Lys	Ala	Leu	Pro	Gln					
				1010					1015					

<210> 42
 <211> 442
 <212> PRT
 <213> Homo sapiens

<400> 42														
Met	Gln	Pro	Pro	Pro	Ser	Leu	Cys	Gly	Arg	Ala	Leu	Val	Ala	Leu
1				5					10					15
Val	Leu	Ala	Cys	Gly	Leu	Ser	Arg	Ile	Trp	Gly	Glu	Glu	Arg	Gly
				20					25					30
Phe	Pro	Pro	Asp	Arg	Ala	Thr	Pro	Leu	Leu	Gln	Thr	Ala	Glu	Ile
				35					40					45
Met	Thr	Pro	Pro	Thr	Lys	Thr	Leu	Trp	Pro	Lys	Gly	Ser	Asn	Ala
				50					55					60
Ser	Leu	Ala	Arg	Ser	Leu	Ala	Pro	Ala	Glu	Val	Pro	Lys	Gly	Asp
				65					70					75
Arg	Thr	Ala	Gly	Ser	Pro	Pro	Arg	Thr	Ile	Ser	Pro	Pro	Pro	Cys
				80					85					90
Gln	Gly	Pro	Ile	Glu	Ile	Lys	Glu	Thr	Phe	Lys	Tyr	Ile	Asn	Thr
				95					100					105
Val	Val	Ser	Cys	Leu	Val	Phe	Val	Leu	Gly	Ile	Ile	Gly	Asn	Ser
				110					115					120
Thr	Leu	Leu	Arg	Ile	Ile	Tyr	Lys	Asn	Lys	Cys	Met	Arg	Asn	Gly
				125					130					135
Pro	Asn	Ile	Leu	Ile	Ala	Ser	Leu	Ala	Leu	Gly	Asp	Leu	Leu	His
				140					145					150
Ile	Val	Ile	Asp	Ile	Pro	Ile	Asn	Val	Tyr	Lys	Leu	Leu	Ala	Glu
				155					160					165
Asp	Trp	Pro	Phe	Gly	Ala	Glu	Met	Cys	Lys	Leu	Val	Pro	Phe	Ile
				170					175					180
Gln	Lys	Ala	Ser	Val	Gly	Ile	Thr	Val	Leu	Ser	Leu	Cys	Ala	Leu

185					190					195				
Ser	Ile	Asp	Arg	Tyr	Arg	Ala	Val	Ala	Ser	Trp	Ser	Arg	Ile	Lys
				200						205				210
Gly	Ile	Gly	Val	Pro	Lys	Trp	Thr	Ala	Val	Glu	Ile	Val	Leu	Ile
				215						220				225
Trp	Val	Val	Ser	Val	Val	Leu	Ala	Val	Pro	Glu	Ala	Ile	Gly	Phe
				230						235				240
Asp	Ile	Ile	Thr	Met	Asp	Tyr	Lys	Gly	Ser	Tyr	Leu	Arg	Ile	Cys
				245						250				255
Leu	Leu	His	Pro	Val	Gln	Lys	Thr	Ala	Phe	Met	Gln	Phe	Tyr	Lys
				260						265				270
Thr	Ala	Lys	Asp	Trp	Trp	Leu	Phe	Ser	Phe	Tyr	Phe	Cys	Leu	Pro
				275						280				285
Leu	Ala	Ile	Thr	Ala	Phe	Phe	Tyr	Thr	Leu	Met	Thr	Cys	Glu	Met
				290						295				300
Leu	Arg	Lys	Lys	Ser	Gly	Met	Gln	Ile	Ala	Leu	Asn	Asp	His	Leu
				305						310				315
Lys	Gln	Arg	Arg	Glu	Val	Ala	Lys	Thr	Val	Phe	Cys	Leu	Val	Leu
				320						325				330
Val	Phe	Ala	Leu	Cys	Trp	Leu	Pro	Leu	His	Leu	Ser	Arg	Ile	Leu
				335						340				345
Lys	Leu	Thr	Leu	Tyr	Asn	Gln	Asn	Asp	Pro	Asn	Arg	Cys	Glu	Leu
				350						355				360
Leu	Ser	Phe	Leu	Leu	Val	Leu	Asp	Tyr	Ile	Gly	Ile	Asn	Met	Ala
				365						370				375
Ser	Leu	Asn	Ser	Cys	Ile	Asn	Pro	Ile	Ala	Leu	Tyr	Leu	Val	Ser
				380						385				390
Lys	Arg	Phe	Lys	Asn	Cys	Phe	Lys	Ser	Cys	Leu	Cys	Cys	Trp	Cys
				395						400				405
Gln	Ser	Phe	Glu	Glu	Lys	Gln	Ser	Leu	Glu	Glu	Lys	Gln	Ser	Cys
				410						415				420
Leu	Lys	Phe	Lys	Ala	Asn	Asp	His	Gly	Tyr	Asp	Asn	Phe	Arg	Ser
				425						430				435
Ser	Asn	Lys	Tyr	Ser	Ser	Ser	Ser							
				440										